

EXHIBIT 1

UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

* * *

KIMBERLY COLE, ALAN COLE,
JAMES MONICA, LINDA BOYD,
MICHAEL MCMAHON, RAY
SMINKEY, JAMES MEDDERS, JUDY
MEDDERS, ROBERT PEPERNO,
SARAH PEPERNO, and KELLY
MCCOY, on behalf of
themselves and all others
similarly situated,

Plaintiffs,

vs. CIVIL ACTION NO. 13-cv-0781-FLW-TJB
NIBCO, INC.,
Defendant.

* * *

Deposition of DEBORAH PREMUS,
Witness herein, called by the Plaintiffs for
cross-examination pursuant to the Rules of Civil
Procedure, taken before me, Stacey M. Mortsolf, a
Notary Public in and for the State of Ohio, at the
Hampton Inn & Suites, 5232 Bardes Road, Mason,
Ohio, on Wednesday, December 14, 2016, at
9:07 a.m.

* * *

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1	EXAMINATIONS CONDUCTED	PAGE	1
2	BY MR SHAMBERG:.....	6	2
3	BY MR. KUHLMAN:.....	237	3
4			4
5	EXHIBITS MARKED		5
6	(Thereupon, Plaintiffs' Exhibit 1,		6
7	email chain Bates stamped NIBCO-Cole		7
8	00053426 through NIBCO-Cole		8
9	00053427, was marked for purposes of		9
10	identification.)..... 43		10
11	(Thereupon, Plaintiffs' Exhibit 2,		11
12	email chain Bates stamped NIBCO-Cole		12
13	00039212 through NIBCO-Cole		13
14	00039213, was marked for purposes of		14
15	identification.)..... 71		15
16	(Thereupon, Plaintiffs' Exhibit 3,		16
17	Inter-Office Confidential Memo to		17
18	Debbie Premus and Pat Borgerding		18
19	from Vince Pulles, was marked for		19
20	purposes of identification.)..... 78		20
21	(Thereupon, Plaintiffs' Exhibit 4,		21
22	email chain Bates stamped NIBCO-Cole		22
23	00032068 through NIBCO-Cole		23
24	00032072, was marked for purposes of		24
25	identification.)..... 85		25
		Page 3	Page 5
1	(Thereupon, Plaintiffs' Exhibit 5,		1 APPEARANCES:
2	Memo from Debbie Premus dated		2 On behalf of the Plaintiffs:
3	February 20, 2007, was marked for		3 Lite DePalma Greenberg
4	purposes of identification.)..... 103		4 By: Kyle A. Shambberg
5	(Thereupon, Plaintiffs' Exhibit 6,		5 Attorney at Law
6	email chain Bates stamped NIBCO-Cole		6 211 West Wacker Drive
7	00036756 through NIBCO-Cole		7 Suite 500
8	00036761, was marked for purposes of		8 Chicago, Illinois 60606
9	identification.)..... 103		9 Kshambberg@litedepalma.com
10	(Thereupon, Plaintiffs' Exhibit 7,		10 312-750-1265
11	email chain Bates stamped NIBCO-Cole		11 On behalf of the Defendant:
12	00094921 through 00094928, was		12 Lathrop & Gage LLP
13	marked for purposes of		13 By: Kevin M. Kuhlman
14	identification.)..... 140		14 Attorney at Law
15	(Thereupon, Plaintiffs' Exhibit 8,		15 2345 Grand Boulevard
16	email chain Bates stamped NIBCO-Cole		16 Suite 2200
17	00037118 through NIBCO-Cole		17 Kansas City, Missouri 64108-2618
18	00037121, was marked for purposes of		18 Kkuhlman@lathropgage.com
19	identification.)..... 154		19 816-292-2000
20	(Thereupon, Plaintiffs' Exhibit 9,		20 ALSO PRESENT:
21	email Bates stamped NIBCO-Cole		21 Jennifer E. Kelly
22	00036596, was marked for purposes of		22 * * *
23	identification.)..... 167		23
24			24
25			25

1 DEBORAH PREMUS
 2 of lawful age, Witness herein, having been first
 3 duly cautioned and sworn, as hereinafter
 4 certified, was examined and said as follows:

5 CROSS-EXAMINATION

6 BY MR SHAMBERG:

7 Q. Good morning, Ms. Premus. My
 8 name's Kyle Shamberg. I represent the
 9 plaintiffs in this lawsuit, and I'm going to be
 10 asking you some questions today, okay? To
 11 start out, could you state your full name and
 12 your date of birth for the record?

13 A. Yes. Deborah Susan Premus,
 14 November 22nd, 1969.

15 MR SHAMBERG: And before we get into
 16 the questioning, I just want to make a quick
 17 statement on the record. Jennifer Kelly is also
 18 in attendance today from Cuneo, Gilbert & LaDuc.
 19 Pursuant to agreement of counsel, she's here to
 20 observe the deposition, and she's doing that
 21 without waiving any rights with respect to her own
 22 case.

23 BY MR SHAMBERG:

24 Q. Ms. Premus, have you ever been
 25 deposed before?

1 remember specifically which -- it's been over a
 2 year since some of those were done.

3 Q. Okay. And you notice there I was
 4 kind of waiting for you to finish your answer,
 5 and that's one of the ground rules that I want
 6 to go over with you today, which is that, you
 7 know, I'm going to ask questions, you're going
 8 to give answers, and I'll try to let you
 9 complete your answer and not talk over you if
 10 you let me finish my question as well; is that
 11 fair?

12 A. Yes.

13 Q. And you're doing a good job so
 14 far, but I also would advise to always answer
 15 verbally because we want to make sure the court
 16 reporter can get a good transcript. And, you
 17 know, nods of the head, shakes of the head
 18 won't come through. And I may remind you about
 19 that, and it's not to be impolite; it's just so
 20 we have a clean record, okay?

21 A. Okay.

22 Q. If I ask a question and you answer
 23 it, I'll assume you understood what my question
 24 was; so if you don't understand the question or
 25 want me to ask it again or in a different way,

1 A. Yes, I have.
 2 Q. How many times?
 3 A. Three times. This will be my
 4 fourth.

5 Q. Okay. Did each of those three
 6 previous depositions relate to your employment
 7 with NIBCO?

8 A. Yes.

9 Q. And one of them, I believe, was in
 10 a case that was brought by Christianson
 11 Plumbing, is that right?

12 A. Yes.

13 Q. And what were -- starting first
 14 chronologically, what were the other two
 15 depositions?

16 A. You know, I can't -- it's -- I
 17 can't remember at this point.

18 Q. Okay. Did each of those other two
 19 depositions relate to NIBCO PEX products?

20 A. Yes.

21 Q. And was it specific to the tubing?

22 A. Yes.

23 Q. Do you recall if Abbott was the
 24 name of the plaintiff in one of those cases?

25 A. It might have been. I don't

1 can you just let me know?

2 A. Yes.

3 Q. And then we can also take a break
 4 at any time. Just say so and we'll do it. I
 5 just ask that if I have a question pending that
 6 you answer that question before we take the
 7 break, okay? Yes?

8 A. Yes.

9 Q. What did you do to prepare for
 10 today's deposition?

11 A. Nothing actually.

12 Q. Didn't review any documents?

13 A. No.

14 Q. Didn't talk to anyone?

15 A. Just Kevin.

16 Q. Just Kevin? Okay.

17 A. This morning.

18 Q. And I don't want you to tell me
 19 anything that you discussed with Kevin, but you
 20 said it was just this morning that you met with
 21 him?

22 A. Correct.

23 Q. And for approximately how long did
 24 you meet?

25 A. Maybe about an hour over

<p>1 breakfast.</p> <p>2 Q. Okay. But you didn't look at any</p> <p>3 documents?</p> <p>4 A. No.</p> <p>5 Q. Didn't take any notes?</p> <p>6 A. No.</p> <p>7 Q. So I want to go through a little</p> <p>8 bit of your employment history, but first let's</p> <p>9 start with what's the highest educational level</p> <p>10 you've received?</p> <p>11 A. I have a master's degree in</p> <p>12 biological sciences.</p> <p>13 Q. Okay. Master's in biological</p> <p>14 sciences. What year did you receive that</p> <p>15 master's degree?</p> <p>16 A. I believe -- I haven't updated my</p> <p>17 resume in a while. I believe it was about</p> <p>18 1996.</p> <p>19 Q. Okay. So somewhere around</p> <p>20 20 years ago?</p> <p>21 A. Right.</p> <p>22 Q. And what was the first -- when you</p> <p>23 said the master's degree was in biological</p> <p>24 sciences, did you also have a bachelor's</p> <p>25 degree, I assume?</p>	<p>1 A. A M O L E. Correct.</p> <p>2 Q. And what was your job at Amole?</p> <p>3 A. I was the microbiology manager.</p> <p>4 Actually, it was a technician, but I was the</p> <p>5 lead in that department.</p> <p>6 Q. Okay. And what does Amole do?</p> <p>7 A. They're no longer in business.</p> <p>8 They manufactured personal care products and</p> <p>9 over-the-counter drug products.</p> <p>10 Q. Okay. What were your job</p> <p>11 responsibilities at Amole?</p> <p>12 A. My responsibilities were to</p> <p>13 basically maintain the document system of test</p> <p>14 methods to product test to make sure that the</p> <p>15 product -- the written specifications that we</p> <p>16 had for, you know, what we manufactured and</p> <p>17 also to audit the facility to make sure that we</p> <p>18 adhered to our manufacturing standards.</p> <p>19 Q. Okay. Did that job relate in any</p> <p>20 way to the manufacture of plumbing products?</p> <p>21 A. The type of product that they made</p> <p>22 did not; however, some of the same general</p> <p>23 procedures such as having the document control</p> <p>24 system, such as having industry standards, such</p> <p>25 as having external auditors and agencies, was,</p>
<p>1 A. Yes, in the same field of study.</p> <p>2 Q. Biological sciences?</p> <p>3 A. Correct.</p> <p>4 Q. What was your first job after you</p> <p>5 obtained that master's degree in biological</p> <p>6 sciences?</p> <p>7 A. Actually, when I got out, I worked</p> <p>8 in a funding and delivery system project for</p> <p>9 the Dayton Business Committee. And that was</p> <p>10 just a temporary short-time assignment prior to</p> <p>11 my first industry position.</p> <p>12 Q. Okay. So that was -- did that job</p> <p>13 relate specifically to your degree in</p> <p>14 biological sciences?</p> <p>15 A. No. It was just, you know, when I</p> <p>16 got out, the job market was kind of tight for</p> <p>17 people with my degree, and so it was kind of a</p> <p>18 short -- knowing it was a short-term, you know,</p> <p>19 not long-term assignment until which time I</p> <p>20 found employment in my field.</p> <p>21 Q. Okay. So let's talk about that.</p> <p>22 What was the first job you had in what you call</p> <p>23 your field?</p> <p>24 A. A company called Amole.</p> <p>25 Q. Amole?</p>	<p>1 in fact, similar to the type of business that</p> <p>2 we have with NIBCO.</p> <p>3 Q. Sort of general quality assurance?</p> <p>4 A. General quality assurance methods.</p> <p>5 Q. I was just making sure you were</p> <p>6 done with your answer.</p> <p>7 A. Right.</p> <p>8 Q. How long were you at Amole then?</p> <p>9 A. You know, it's been a long time</p> <p>10 since I've looked at my resume. I was there</p> <p>11 until the company went out of business. It was</p> <p>12 one or two years. I can't remember exactly.</p> <p>13 Q. Okay. And that's fine. And I</p> <p>14 understand it's been a while. So just if</p> <p>15 you're able to give me your closest</p> <p>16 approximate, that's certainly fine. So after</p> <p>17 about those one or two years, where did you go</p> <p>18 next?</p> <p>19 A. To one of our clients up in</p> <p>20 Portland, New York.</p> <p>21 Q. What was the name of the client?</p> <p>22 A. Marietta Corporation.</p> <p>23 Q. And what was your job there?</p> <p>24 A. I was a laboratory specialist, a</p> <p>25 C-shift supervisor.</p>

1 Q. You said C-shift supervisor?
 2 A. Correct.
 3 Q. And what were your job
 4 responsibilities as a lab specialist?
 5 A. Actually, when I got there, my
 6 responsibilities were different than what my
 7 job description was, so I was sent off site to
 8 their new contractor basically to do the
 9 startup and scaleup and product delivery of
 10 what we used to make for them at Amole.
 11 Q. Okay. What did you make for them
 12 at Amole? What was the product?
 13 A. Shampoos and conditioners, hotel
 14 amenities.
 15 Q. I used some of those last night.
 16 A. I was going to say, if they say
 17 Marietta, then that's --
 18 Q. I'll have to check. And did your
 19 job at Marietta in any way relate to the
 20 manufacture or sale of plumbing products?
 21 A. Again, you know, it was a
 22 distinctly different type of product, but the
 23 same like manufacturing standards, document
 24 control systems, quality control systems, and
 25 general quality procedures are very similar

1 Q. -- the Ohio area? Okay. And what
 2 was the job you took at P&G?
 3 A. Actually, I worked in drug safety
 4 assessment. It was with the P&G
 5 pharmaceuticals division, and my responsibility
 6 was to aid in the assembly of FDA submissions.
 7 Q. How specifically did you aid in
 8 that process?
 9 A. I helped a lot of the researchers
 10 like write the reports for basically like drug
 11 efficacy and safety assessments, some of the
 12 research reports. I would take the data, put
 13 the templates together, in many cases write the
 14 actual report, and then co-author it with some
 15 of the researchers at P&G.
 16 Q. Okay. And so, again, that job in
 17 drug safety at P&G did not relate to the
 18 manufacture of plumbing products, correct?
 19 A. Not specifically, but it held
 20 higher regulatory standards basically dealing
 21 with the Food and Drug Administration.
 22 Q. So you still needed to ensure
 23 quality basically?
 24 A. Absolutely.
 25 Q. But just not for plumbing-related

1 across the industries.
 2 Q. Okay. So similar quality control
 3 procedures but not plumbing related --
 4 A. That's correct.
 5 Q. -- at Marietta? About how long
 6 were you at Marietta?
 7 A. I was there for probably about a
 8 year. I can't remember without looking at my
 9 resume.
 10 Q. Sure. So about another year. So
 11 now we're in late '90s probably or maybe right
 12 around 2000, somewhere in that ballpark?
 13 A. Yes. But I can't remember -- I'd
 14 have to have my resume in front of me.
 15 Q. Okay. And I'm not going to hold
 16 you to, you know, an exact time period here.
 17 So where did you go when you left Marietta?
 18 A. I actually got a job offer --
 19 interview offer from Proctor & Gamble, which
 20 was back in this area where my family is. And
 21 so I interviewed, got the job offer, accepted
 22 the position.
 23 Q. Okay. So that moved you from New
 24 York back to --
 25 A. Yes.

1 products in that instance?
 2 A. Correct.
 3 Q. How long were you at P&G?
 4 A. I was at P&G for two years.
 5 Actually, that particular role I was in, I was
 6 in for one year. And then our group got
 7 discontinued, and so at that time I stayed with
 8 P&G, and I moved over to the product
 9 development section in hair care.
 10 Q. Okay. Was that role in product
 11 development in hair care similar to the role
 12 that you had at Marietta?
 13 A. It was more of a manufacturing
 14 engineering-type position. I had a project
 15 that I was working on that dealt with some of
 16 the raw materials where we had to go out to
 17 basically a pilot scale facility, a miniature
 18 facility, to replicate some of the large scale
 19 production. And basically what we did was
 20 evaluated several manufacturing changes on the
 21 quality of ingredients that went into our hair
 22 care products. I can't talk in more detail
 23 because some of that's confidential and I'm
 24 still bound by that agreement with the company.
 25 Q. Sure. And I don't want to try to

1 rip off the P&G formula, so that's
 2 understandable. And that was your -- around
 3 two years you were there?

4 A. Correct.

5 Q. And that was the second year you
 6 were there that you were in product
 7 development?

8 A. That's correct.

9 Q. After you left P&G, what was your
 10 next job you held?

11 A. My next job was I went to a -- was
 12 I was offered a position in management. I went
 13 to a company called Advanced Testing Labs.

14 Q. Okay. And what does Advanced
 15 Testing Labs do?

16 A. Basically, they had a microbiology
 17 division, a chemistry division, and a product
 18 stability division. Basically, what I did was
 19 product testing. I managed the laboratory that
 20 did product testing.

21 Q. Okay. Was that -- did that
 22 involve testing of products that were in
 23 development?

24 A. They could have been. Basically,
 25 it was testing following industry methods

1 Q. How long were you at Advanced --
 2 I'm sorry. I might have said Technology.
 3 Advanced Testing Laboratories?

4 A. Yes. I was there for six months.

5 Q. Six months. Okay. And why did
 6 you decide to leave after six months?

7 A. I decided to leave because the
 8 environment was not to my liking at the
 9 company.

10 Q. In what way?

11 A. In what way? We were putting in
 12 about 70 to 80 hours per week, and just the
 13 morale of the personnel that I supervised was
 14 not good. It wasn't a comfortable work
 15 environment for me.

16 Q. Understandable. So after you
 17 left, where did you go next?

18 A. I went to a company called
 19 Meridian Biosciences.

20 Q. Meridian Biosciences. What do
 21 they do?

22 A. They manufacture in vitro
 23 diagnostic kits.

24 Q. And what was your role at
 25 Meridian?

1 called compendial methods. They're published
 2 methods that are specific to, you know,
 3 whatever product in your industry that you
 4 happen to be testing the product for. There
 5 were multiple in that particular company coming
 6 in.

7 Q. Okay. So I guess what I'm trying
 8 to ask, maybe you can clarify, is was it
 9 testing of products before they went to market
 10 or did it also involve testing of products that
 11 maybe had some issue after sale, an issue in
 12 the field, and they were being tested for the
 13 cause of those issues?

14 A. We wouldn't necessarily know that.

15 Q. You'd just say -- a client would
 16 say, here, test this?

17 A. Correct. They could be routine
 18 product tests for manufacturing. They could be
 19 developmental. We wouldn't necessarily know
 20 that.

21 Q. Okay. What Advanced Technology
 22 Labs would do in its testing wasn't affected by
 23 what the reason for the testing was; is that
 24 fair?

25 A. That's correct.

1 A. The biological quality assurance
 2 manager.

3 Q. Okay. Can you kind of just
 4 briefly describe what your responsibilities
 5 were in that role?

6 A. Yes. Basically, I did the
 7 start-up of the lab. We did microbiological
 8 testing of the product itself that we
 9 manufactured, air quality testing in the lab.
 10 I also was responsible for overseeing and
 11 qualifying external contractors for doing
 12 preservative effectiveness testing.

13 Q. Okay. Did your job at Meridian
 14 involve quality assurance for plumbing
 15 products?

16 A. Not for plumbing products, but,
 17 again, the methodology and general framework of
 18 the quality system is very similar.

19 Q. So can you just -- because we've
 20 touched on that point a few times, that there
 21 are certain kind of generally applicable
 22 quality assurance procedures or methods that
 23 work kind of regardless of what the product is,
 24 is that fair?

25 A. Correct.

1 Q. Can you describe for me in your
 2 own words what those methods or procedures are
 3 that apply across different industries?

4 A. Well, your requirements for
 5 document control and revision are similar. The
 6 requirements for, you know, making sure that,
 7 you know, if you have listing agencies and they
 8 have standards or their standards refer to, you
 9 know, industry specific standards, the
 10 responsibility for making sure that your test
 11 methods conform to those standards.
 12 Responsibility for working with agencies when
 13 they come on site to audit is similar. The
 14 degree of documentation and the retention of
 15 documentation is similar.

16 When you're running a method, no
 17 matter what that method is, accuracy is
 18 important. That's similar across the -- it
 19 doesn't really matter what you're testing as
 20 long as that test is run correctly and it meets
 21 the standard and the results are reliable.
 22 That's similar.

23 Q. Okay. So going back to Meridian,
 24 about how long were you at Meridian?

25 A. Oh, gosh, a year -- I can't

1 six months, but I don't remember the exact
 2 amount of time.

3 Q. Okay. That's fine. After those
 4 four to six months at Ethicon, what job did you
 5 have next?

6 A. Then I went to the E-BEAM
 7 Services, which that was, at the time, a sister
 8 company of Consolidated Plumbing Industries.

9 Q. Okay. And I will ask you some
 10 questions about Consolidated Plumbing
 11 Industries pretty shortly here.

12 A. Okay.

13 Q. When we get to that, I'll just
 14 refer to Consolidated Plumbing Industries as
 15 CPI.

16 A. CPI.

17 Q. Is that okay?

18 A. Yes.

19 Q. All right. About how long were
 20 you at E-BEAM?

21 A. Actually, my role kind of just
 22 morphed since that period of time. I mean, the
 23 first year I worked for E-BEAM on the E-BEAM
 24 payroll, but a certain portion of my pay was
 25 from Consolidated Plumbing Industries because I

1 remember exactly.

2 Q. Somewhere around a year?

3 A. Right.

4 Q. And where did you go after
 5 Meridian?

6 A. After, my job was limited at
 7 Meridian. I worked for a short period of time
 8 at Ethicon Endosurgery just on a temporary
 9 assignment, probably four to six months. I
 10 can't remember exactly how long.

11 Q. Okay. What did that assignment
 12 with Ethicon involve?

13 A. Ethicon Endosurgery, they had a
 14 medical device. It was a bariatric anastomosis
 15 device, if I remember, they were doing a good
 16 laboratory practice submission on. And
 17 basically what I did was helped to review and
 18 assemble the submission that was going to the
 19 agency.

20 Q. Okay. So you were there, I think
 21 you said, for about six months or so?

22 A. Four to --

23 Q. Four to --

24 A. I can't remember. I can't
 25 remember exactly. It wasn't longer than

1 managed both labs. And I managed both labs for
 2 about a year, and then I went exclusively onto
 3 CPI's payroll.

4 Q. Okay. So did that mean that CPI
 5 and E-BEAM were both owned by the same entity?

6 A. They had some of the same board
 7 members, and both of the companies were housed
 8 in the same building. So even though I came in
 9 as an E-BEAM employee, I managed both labs for
 10 both companies until which time I became
 11 exclusively a CPI employee.

12 Q. You said CPI and E-BEAM were in
 13 the same facility?

14 A. Yes.

15 Q. And we'll get to this in a little
 16 bit more detail later, but when CPI was
 17 manufacturing PEX pipe and cross-linking that
 18 pipe, that cross-linking was essentially done
 19 on site at the E-BEAM facility, correct?

20 A. Correct.

21 Q. Okay. What was your job title
 22 when you were with E-BEAM specifically?

23 A. I think it was quality supervisor,
 24 but I can't remember exactly.

25 Q. Okay. And, again, can you just

1 briefly describe what your responsibilities
 2 were as quality supervisor or whatever the
 3 title might have been specifically at E-BEAM?

4 A. I was responsible for supervising
 5 the personnel that were doing the bench
 6 testing. I did some of the bench testing as
 7 well. I was responsible for maintaining
 8 document control systems. I was responsible
 9 for maintaining current industry standards
 10 specific to the products that CPI had.

11 E-BEAM didn't make products. They
 12 basically were a processor. My responsibility
 13 was for validation of their beam or their
 14 radiation testing and monitoring I was also
 15 responsible for.

16 Q. Okay. When you sort of made that
 17 fluid switch to then being technically a CPI
 18 employee, did your job title change?

19 A. Yes. It became quality/regulatory
 20 manager.

21 Q. Okay. And about how long into
 22 your employment with -- how long were you
 23 employed at E-BEAM before that transition
 24 occurred?

25 A. For roughly a year.

1 responsibilities that you had when you were
 2 working for E-BEAM in terms of the oversight
 3 for that cross-linking process that you were
 4 describing earlier, is that accurate?

5 A. The oversight for the
 6 cross-linking process from a CPI perspective.
 7 I was no longer responsible for E-BEAM
 8 operations.

9 Q. Okay. And then -- so when you
 10 were with E-BEAM, it was focused strictly on
 11 that, but -- strike that. So what additional
 12 responsibilities did you take on when you moved
 13 over to CPI?

14 A. Primarily just direct
 15 communication back and forth with some of the
 16 listing agencies.

17 Q. Okay. Did you take on any
 18 additional oversight over the extrusion process
 19 of PEX pipe aside from the cross-linking
 20 process?

21 A. Just the quality testing process.

22 Q. Okay. When did CPI first begin
 23 manufacturing PEX tubing?

24 A. You know, I don't know an exact
 25 date. I can tell you that I started in 2004,

1 Q. So do you have -- can you -- at
 2 this point can you give a time frame as to when
 3 that change occurred when you started working
 4 for CPI?

5 A. I can't give you an exact time.
 6 It was around 2004 that I started for E-BEAM.
 7 It was probably somewhere in 2005 that that
 8 occurred.

9 Q. Okay. And how did your job
 10 responsibilities change when you became the
 11 quality manager at CPI?

12 A. Really, my job responsibilities
 13 that I had going into it remained the same.
 14 CPI was growing, and so we had a higher
 15 workload going through that lab at the time.
 16 The only thing really different that I did, I
 17 had more discussions with some of our -- direct
 18 discussions with some of our listing agencies,
 19 but still, you know, who we listed with was at
 20 the direction of the plant manager.

21 Q. Who was the plant manager at that
 22 time?

23 A. Larry Smallwood.

24 Q. So when you started working as a
 25 CPI employee, you still had the same

1 and we were manufacturing PEX at that time. I
 2 don't know the history prior to that in detail.

3 Q. Sometime before 2004?

4 A. Correct.

5 Q. And also just to clarify, when I'm
 6 referring to PEX tubing, I may also use the
 7 word pipe. Can we agree that pipe and tubing
 8 are interchangeable terms?

9 A. Yes.

10 Q. When you arrived at CPI, was CPI
 11 manufacturing PEX pipe for sale by entities
 12 other than CPI?

13 A. We manufactured pipe that had our
 14 brand name on it, and we also manufactured pipe
 15 that, the way it was listed, we printed another
 16 customer's name on it, another name for a
 17 listing.

18 Q. And might that also appear as ANF
 19 in documents?

20 A. Potentially.

21 Q. Who is another customer?

22 A. You know, I can't remember at the
 23 time. It's been so long ago. There were a
 24 handful of them. I can't remember.

25 Q. Did CPI ever manufacture a product

<p>1 called Dura-PEX?</p> <p>2 A. Yes.</p> <p>3 Q. Was that a PEX-C product?</p> <p>4 A. Yes, it was.</p> <p>5 Q. Was another entity manufacturing</p> <p>6 Dura-PEX tubing prior to CPI?</p> <p>7 A. I believe CPI bought the business</p> <p>8 from Duraline, but I don't -- I don't have any</p> <p>9 of the details other than having heard the name</p> <p>10 in the past.</p> <p>11 Q. So you'd kind of just be</p> <p>12 speculating based on the Dura that there's some</p> <p>13 connection there, but that would be it?</p> <p>14 A. That's correct. That's</p> <p>15 speculation only.</p> <p>16 Q. Why is certain PEX referred to as</p> <p>17 PEX-C specifically?</p> <p>18 A. The C stands for the type of</p> <p>19 cross-linking. In this case it's electron beam</p> <p>20 cross-linking process.</p> <p>21 Q. And are there also other methods</p> <p>22 of cross-linking PEX tubing?</p> <p>23 A. That's correct.</p> <p>24 Q. What are those methods?</p> <p>25 A. There's PEX-A and PEX-C.</p>	<p>1 E-BEAM and had the facility on site?</p> <p>2 A. I can't speculate.</p> <p>3 Q. You never had a conversation with</p> <p>4 anyone at CPI about why PEX-C was chosen as the</p> <p>5 manufacturing method?</p> <p>6 A. Not that I can recall.</p> <p>7 Q. Did CPI ever manufacture fittings</p> <p>8 for use in plumbing applications?</p> <p>9 A. To my knowledge, we never</p> <p>10 manufactured fittings, but we did purchase</p> <p>11 fittings for distribution.</p> <p>12 Q. Okay. Did your quality management</p> <p>13 role at CPI involve any quality assurance</p> <p>14 related to the fittings that CPI would sell?</p> <p>15 A. At CPI, no. That was handled via</p> <p>16 purchasing.</p> <p>17 Q. So the purchasing department was</p> <p>18 responsible for ensuring the quality of</p> <p>19 incoming fittings? Is that what you're saying?</p> <p>20 A. Yes. My responsibility was</p> <p>21 specifically to the manufacture of the product</p> <p>22 at the site, which was PEX.</p> <p>23 Q. The tubing?</p> <p>24 A. Correct.</p> <p>25 Q. So is that also true for clamps?</p>
<p>1 Q. Well, I think we're talking about</p> <p>2 PEX-C, right? That's the one that uses the</p> <p>3 electron beam?</p> <p>4 A. Yeah. PEX-A and PEX-B. I'm</p> <p>5 sorry. We're talking about PEX-C.</p> <p>6 Q. Okay. How is PEX-A cross-linked?</p> <p>7 A. PEX-A -- I don't know a lot about</p> <p>8 it because I've not dealt with that particular</p> <p>9 process. I believe it's some kind of a</p> <p>10 vulcanization process.</p> <p>11 Q. Vulcanization. Okay. What about</p> <p>12 PEX-B? How is PEX-B cross-linked?</p> <p>13 A. PEX-B is steam cured.</p> <p>14 Q. Steam cured? Okay. So that's a</p> <p>15 chemical process?</p> <p>16 A. Heat and humidity cure process.</p> <p>17 Q. Did CPI manufacture PEX-A tubing</p> <p>18 during the time you were there?</p> <p>19 A. CPI only manufactured PEX-C tubing</p> <p>20 to my knowledge.</p> <p>21 Q. Why did CPI only manufacture PEX-C</p> <p>22 tubing?</p> <p>23 A. I don't have the answer to that.</p> <p>24 Q. Do you think it was related to the</p> <p>25 fact that the entity that owned CPI also owned</p>	<p>1 In other words, your role in quality assurance</p> <p>2 at CPI didn't involve clamps --</p> <p>3 A. No.</p> <p>4 Q. -- is that accurate?</p> <p>5 A. No. It was specific to the tubing</p> <p>6 itself.</p> <p>7 Q. Okay. And maybe to shorten things</p> <p>8 up later, before we get into it, but you</p> <p>9 eventually became a NIBCO employee, is that</p> <p>10 correct?</p> <p>11 A. Correct.</p> <p>12 Q. During your time when you've been</p> <p>13 employed at NIBCO, is your role in oversight</p> <p>14 over the quality of fittings being manufactured</p> <p>15 or sold by NIBCO?</p> <p>16 A. The only fittings that we test,</p> <p>17 and it's -- it was -- I can't remember the</p> <p>18 exact date, but maybe three or so years ago</p> <p>19 when you had a decision that we would start</p> <p>20 scanning metal insert fittings, but those are</p> <p>21 the only fittings that we test at the NIBCO</p> <p>22 facility. Again, you know, I'm responsible for</p> <p>23 the manufacture of the pipe itself. We have a</p> <p>24 purchasing and supplier assessment process</p> <p>25 that's handled out of our corporate that deals</p>

1 with the fittings.

2 Q. Okay. So you talked about that
3 metallurgical testing?

4 A. Yes.

5 Q. But that's not something you were
6 directly involved in, right? You just know
7 that it's done?

8 A. Well, the XRF scanning we do.
9 When I said metallurgical, that's just the XRF
10 scanning only. That's a very small part of
11 that evaluation. We don't actually do
12 metallurgical assessments of like returned
13 products or anything in the facility. We just
14 do like the incoming fittings just to make sure
15 that the scan matches what the metal alloy is
16 that they say that they're sending us.

17 Q. Okay. So it's just to make sure
18 that, for lack of a better term, what your
19 supplier is saying is in the fittings and what
20 they're made out of is actually what they're
21 made out of?

22 A. That's the limit to the testing
23 that we do.

24 Q. Okay. And then for clamps, has
25 your role at NIBCO in quality assurance ever

1 standard meets the standard. At the time tube is
2 returned, again, I'm qualified to go back, pull
3 the original testing that was done. We retest,
4 for example, wall thickness, outer diameter,
5 physical appearance, the tests that are specified
6 by the industry standards, and make sure that that
7 returned product -- well, determine whether that
8 returned product does or does not meet the
9 standards for PEX.

10 I'm qualified to visually look at it
11 and determine the type of failure that we have.
12 One term that may come up frequently with PEX is
13 oxidative-type failure. There are numerous root
14 causes for an oxidative type failure, but when PEX
15 fails, that's generally the type of failure mode
16 that you see in that particular type of product.
17 BY MR SHAMBERG:

18 Q. Okay. So let's, you know -- for
19 sake of clarity, let's focus on a pipe that
20 comes back in that has one of these
21 oxidative-type failures.

22 A. Okay.

23 Q. And let's start here, I guess.
24 Are you -- would you say you are qualified to
25 determine what the root cause of that failure

1 involved oversight over clamps?

2 A. No.

3 Q. Okay. What qualifies you to make
4 conclusions about the root cause of field
5 return failures in PEX-C tubing?

6 A. Okay. Can you specify identify
7 what types of failures you're inquiring about?

8 Q. Let's start generally, I guess,
9 and then we can maybe get more specific. So is
10 there a way for you to answer that question
11 just in general? What qualifies you to make
12 conclusions about the root causes of failed
13 PEX-C tubing?

14 MR. KUHLMAN: Object to form.

15 THE WITNESS: Do I answer?

16 MR. KUHLMAN: Yes. I may object
17 periodically from time to time. It's just to
18 preserve that objection for the record, and it's
19 going to the form of the question. Unless I
20 instruct you to explicitly not to answer, go ahead
21 and object -- or go ahead and answer. Thank you.

22 THE WITNESS: When a piece of pipe is
23 returned, you know, I'm qualified to run a test at
24 the time of manufacture that indicates that the
25 tubing to the best of our knowledge based on the

1 was?

2 A. What contributed to the oxidative
3 failure?

4 Q. Yes. What caused the failure.

5 A. Well, there would be two parts to
6 that assessment. One would be the laboratory
7 evaluation of the sample and also an evaluation
8 of the site in which it failed to begin with.
9 I wasn't responsible for actually going out to
10 the site where the customer failures were.
11 From a lab perspective, yes, I was qualified to
12 say this is an oxidative-type failure versus a
13 ductile flyer. Ductile failures were you had a
14 pliable product that simply just through
15 overpressurization or something blows in a
16 certain physical manner as opposed to a brittle
17 split over time. I am qualified to
18 differentiate between the two. It would take
19 an additional evaluation of going out to the
20 site to determine what the environmental
21 conditions were that might have contributed to
22 that oxidative failure.

23 Q. Okay. So I guess then absent a
24 site visit to determine the cause of a
25 particular failure in a particular instance,

1 your role would be limited to stating the
 2 condition of the pipe and what the failure was
 3 rather than the cause of the failure?

4 A. There might be some circumstances
 5 where I may have some clues based on the
 6 physical appearance, but, again, you know, one
 7 would have to look at all of the possible
 8 contributing factors, not only manufacturing
 9 but insulation and usage as well.

10 Q. What would be some of those hints
 11 that you might see that would give you maybe a
 12 hypothesis as to what the cause of the failure
 13 was?

14 A. If I saw a tube that had an
 15 expanded outer diameter in the vicinity of the
 16 attack, it's possible that pressure could have
 17 been a contributing factor. If I see a tube
 18 that is bent and there's a crack perpendicular
 19 to the direction of the tubing on the outside
 20 of the bend, it's possible that bend stress
 21 could have been a contributing factor but,
 22 again, you know, those things would have to be
 23 evaluated both in the field and via the
 24 laboratory assessment as well.

25 Q. Absent an inspection in the field,

1 would you be able to make a determination as to
 2 whether an oxidative-type failure in a sample
 3 of PEX-C tubing was due to a manufacturing or
 4 design defect versus another issue in the
 5 field? For example, installation?

6 A. What I would be able to determine
 7 is based on the testing that we could do to
 8 standard is that that tubing met the standard
 9 at the time of release and at the time of
 10 return.

11 Q. So if somebody came up to you
 12 after your laboratory assessment and said,
 13 Debbie, there's this oxidative-type crack in
 14 the pipe. Why did this happen? Would you be
 15 able to answer that question?

16 MR. KUHLMAN: Object to form.

17 THE WITNESS: I would be able to
 18 determine whether or not that tube met the
 19 manufacturing quality standards for PEX. I would
 20 be able to -- if I looked at the point of leak, I
 21 could tell you what type of a leak it is. Is it
 22 oxidative? Is it ductile? And I could give you a
 23 list or some general ideas of the types of
 24 environmental variables that typically, you know,
 25 would cause that. I could not in every case

1 specify or pinpoint an exact cause. There could
 2 be many.

3 BY MR SHAMBERG:

4 Q. Okay. So in that same scenario,
 5 if you'd only done the laboratory assessment
 6 and there had been no field inspection and you
 7 were asked was this oxidative-type failure due
 8 to a manufacturing defect or an issue in
 9 installation, would you be able to answer that
 10 question?

11 MR. KUHLMAN: Object to the form.

12 THE WITNESS: I would be able to say
 13 that based on the industry standard in effect at
 14 the time, that product appears to meet the
 15 standard based on the testing that we had done.
 16 Therefore, I would not be able to determine that
 17 there is a manufacturing defect, but yet I could
 18 not give an exact root cause for that particular
 19 failure without knowing additional information.

20 BY MR SHAMBERG:

21 Q. So the field inspection is
 22 important in that process then? Let me
 23 rephrase that. The field inspection is
 24 important in determining the root cause of a
 25 particular failure?

1 A. If you want to pinpoint it down to
 2 an exact cause.

3 Q. Okay. So I think you mentioned
 4 that you had some experience both at CPI and
 5 previously in other jobs in dealing with
 6 third-party listing or certification agencies,
 7 is that true?

8 A. Yes.

9 Q. At CPI from 2004 to when you
 10 started, let's say, until around the middle of
 11 2006, what, if any, third-party listing
 12 agencies did CPI list its PEX-C pipe with?

13 A. We used Underwriters Labs. We
 14 used NSF. And I believe -- and I don't
 15 remember the date that this started -- I
 16 believe we also co-listed with IAPMO.

17 Q. Okay.

18 A. But I don't remember the exact
 19 dates those started or terminated or --

20 Q. Okay. That was going to be my
 21 next question. Do you remember -- if you don't
 22 remember the dates, do you remember the
 23 sequence? In other words, which was first,
 24 which was second?

25 A. I really don't. I remember

1 Underwriters in the first year of my
 2 employment, but I don't remember what or if we
 3 used them for afterwards.

4 Q. Regardless of which of the
 5 entities you listed CPI may have been listing
 6 its product with at the time, was CPI ever
 7 concerned about losing one of those listings
 8 due to failure to meet chlorine resistance
 9 requirements?

10 A. When I started, the chlorine --
 11 the first year I started, the chlorine
 12 resistance requirements were not yet in effect.
 13 I was part of -- in the very early years there
 14 was an industry-wide task force at NSF. They
 15 had JANA Laboratories. They had
 16 representatives from several competitors on it
 17 that were dealing with, you know, some
 18 technicalities that people were running into at
 19 the time that, you know, that listing process
 20 was going into effect. It wasn't a matter of
 21 being concerned of losing the listing. It
 22 was -- at the beginning of my employment it was
 23 trying to pull together what we needed to get
 24 our products certified to a standard that was
 25 brand-new that was being brought out across

1 A. It feels like there should be
 2 another piece of paper here but I guess it's
 3 just stuck.

4 Q. Do you have -- so there's some
 5 numbers at the bottom of the document that are
 6 what's called Bates numbers. They're just used
 7 to identify documents.

8 A. Okay.

9 Q. This one says NIBCO-Cole 00053426.
 10 Is that what yours says as well?

11 A. Yes.

12 Q. And then there's a second page
 13 that ends in 427. Is that also what you have?

14 A. Yes.

15 Q. So I want to ask you just a couple
 16 questions about this document starting with the
 17 email at the top of the first page. Is that an
 18 email you wrote?

19 A. Yes, it is.

20 Q. Okay. So that sibemusher is your
 21 email address?

22 A. Yes.

23 Q. And I think that relates to, as we
 24 were discussing off the record, your former
 25 life, shall we say, in dog racing?

1 industry.

2 Q. Okay. So, in other words, there
 3 wasn't a concern at first about losing a
 4 listing because there was no listing for
 5 chlorine resistance when you first started at
 6 CPI?

7 A. That's correct. It was just
 8 something that was just getting to the point
 9 where it was going to go into effect.

10 Q. Do you recall when the policy went
 11 into effect?

12 A. I don't remember the specific
 13 year.

14 Q. Given the layout here, this is
 15 where I'm going to start to get my workout, and
 16 I'm going to come and hand you a document.

17 (Thereupon, Plaintiffs' Exhibit
 18 Premus 1, email chain Bates stamped NIBCO-Cole
 19 00053426 through NIBCO-Cole 00053427, was marked
 20 for purposes of identification.)
 21 BY MR SHAMBERG:

22 Q. So, Ms. Premus, I'll ask you to
 23 take a look at that document, and then I'll
 24 have some questions. Just let me know when
 25 you're done reviewing it.

1 A. Yes.

2 Q. And is the Larry that this is
 3 directed to Larry Smallwood that you mentioned
 4 earlier?

5 A. That is correct.

6 Q. And so in this email, this is
 7 February of 2006, you say you're looking
 8 forward to when the UL chlorine policy goes
 9 into effect and forces us to drop our UL PEX
 10 listing. First of all, is UL Underwriters
 11 Laboratory?

12 A. That's correct.

13 Q. Why would that chlorine policy
 14 force you to drop your listing with
 15 Underwriters Laboratory?

16 A. I don't remember. It's been so
 17 long ago, I don't remember all of the details.
 18 The only thing I can say that I do remember,
 19 there are certain labs and at the time in
 20 particular there were only a very limited
 21 number of labs that could run that chlorine
 22 test. And, if I recall, Bodycote Polymer was a
 23 foreign lab. I had no dealings directly with
 24 Bodycote. My predecessor was the one that had
 25 set that up.

1 What I remember being told -- and,
 2 like I said, it's been a long time -- my
 3 understanding was they had a lot of difficulty,
 4 I guess, with the quality of Bodycote's work.
 5 I don't have any details. Like I said, I never
 6 worked with them personally. And so
 7 apparently -- I don't even want to speculate
 8 other than, you know, what's written here is
 9 that, you know, I was looking into the transfer
 10 to NSF at the time.

11 Q. Okay. You mentioned a predecessor
 12 at CPI. Who was that predecessor?

13 A. Tony Michaels.

14 Q. Tony Michaels? Okay. And --

15 A. Tony Michael or Michaels. I'm not
 16 sure of the exact spelling of the last name.

17 Q. Okay. And he was the quality
 18 assurance manager at CPI before you?

19 A. Prior to me, correct.

20 Q. So that would have been before
 21 2004 when --

22 A. Correct.

23 Q. -- he was in the role?

24 A. Correct. All I know is that the
 25 plant manager was dissatisfied with Bodycote

1 at CPI, was the method for manufacturing PEX-C
 2 tubing the same or did it change?

3 A. To my knowledge, the method was
 4 the same.

5 Q. And then NIBCO purchased the
 6 assets of CPI in 2006, is that correct?

7 A. Correct.

8 Q. When NIBCO began manufacturing
 9 that PEX-C tubing, did the manufacturing method
 10 change from the method that CPI had been using?

11 A. Not that I'm aware of.

12 Q. To your knowledge, did that method
 13 change at any time for the 1006 tubing?

14 A. For the 1006 tubing, not that I'm
 15 aware of.

16 MR. KUHLMAN: Object to form.

17 BY MR SHAMBERG:

18 Q. Okay. We're done with this
 19 document. We can set it aside. And I want to
 20 get in now to talking a little bit about that
 21 manufacturing process. So let's focus just for
 22 now on the 1006 tubing that CPI was
 23 manufacturing when NIBCO took over the
 24 operations for. Can you explain what extrusion
 25 is?

1 Polymer, and I don't have any additional
 2 details on that.

3 Q. Okay. Is that why you say you'd
 4 be -- in the second paragraph here, you say we
 5 would still be stuck with Bodycote Polymer for
 6 any follow-ups?

7 A. I would speculate that's probably
 8 why I said that.

9 Q. But you don't know sitting here
 10 today why you said that the new UL chlorine
 11 policy would force you to drop your listing for
 12 PEX tubing?

13 A. The only thing I can speculate is
 14 that it would force us, if we stayed with UL,
 15 to continue to work with Bodycote Polymer, you
 16 know, and, like I said, that was before my
 17 time. I don't know the ins and outs for the
 18 reasoning behind that. It's been so long, I
 19 just don't remember.

20 Q. Do you think it was because the
 21 PEX tubing would have failed the testing
 22 required to receive the UL listing?

23 A. I don't have any specific details
 24 to that. I don't remember.

25 Q. Okay. Was the -- during your time

1 A. Basically, it would be the taking
 2 of components or raw materials such as our
 3 colorant and our resin and at a temperature
 4 basically blending them together.

5 Q. Okay. And you said some of the
 6 materials are colorant --

7 A. We have colorant --

8 Q. -- or resin.

9 A. -- and a base resin.

10 Q. So the colorants, I'm assuming,
 11 gives the product its particular color?

12 A. Yes.

13 Q. Are there any other attributes
 14 that the colorant adds to the PEX-C product?

15 A. It would also include the
 16 anti-oxidant and UV stabilizers.

17 Q. Would the selection of a
 18 particular colorant have any effect on the
 19 chlorine resistance of the PEX-C pipe that it
 20 was used to manufacture?

21 MR. KUHLMAN: Object to the form.

22 THE WITNESS: It would depend on the
 23 chemical composition of the color.

24 BY MR SHAMBERG:

25 Q. Okay. In what way?

1 A. Actually, I'm not sure that even
2 to this day it's fully understood. That's why
3 we do the chlorine testing.

4 Q. Okay. So it seems like you're
5 saying -- correct me if I'm wrong -- that there
6 can be a difference in chlorine resistance
7 based on the particular colorant that's chosen;
8 but sitting here today, there's no way to know
9 exactly what the cause of that difference is?

10 A. To my knowledge, no. But, like I
11 said, that's not something I'm aware of
12 personally.

13 Q. Someone may know?

14 A. I don't know.

15 Q. Okay. So what about the resin
16 then? What is the significance of the resin in
17 the manufacturing process?

18 MR. KUHLMAN: Object to the form.

19 THE WITNESS: I mean, it's
20 essentially the primary material with which our
21 product is manufactured.

22 BY MR SHAMBERG:

23 Q. Can the choice of one resin versus
24 another resin impact the chlorine resistance of
25 a fully extruded PEX-C tubing?

1 A. Potentially, which is why, if you
2 have a different resin, it's also required to
3 be tested.

4 Q. Do you know why one resin would
5 have a different impact on chlorine resistance
6 than another?

7 A. Personally, I don't know.

8 Q. Have you ever done any
9 investigation to answer that question?

10 A. Not in my role.

11 Q. Okay. So there's a colorant and
12 there's a resin. Then how -- essentially, the
13 extrusion process is mixing those things
14 together, or can you just explain how those
15 materials are extruded? What occurs during the
16 extrusion process?

17 A. The products are metered into a
18 hopper. They're heated and pushed through a
19 screw in the extruders and basically go through
20 a sizing plate and into a vacuum chamber where
21 they come out as cooled PEX. They're cooled
22 down obviously and solidified in a continuous
23 process.

24 Q. At what point in this process does
25 the cross-linking occur?

1 A. That occurs after the extrusion
2 process.

3 Q. Okay. Can you tell me or estimate
4 for me what the total length of time to extrude
5 a particular reel of pipe would be?

6 MR. KUHLMAN: Object to the form.

7 THE WITNESS: It depends on the size
8 of the reel. An average speed may be 60 to
9 80 feet per minute as the extruder output,
10 depending on the size of the tubing. We can have
11 10,000 feet on a reel. We may have 40,000 feet on
12 a reel.

13 BY MR SHAMBERG:

14 Q. How long is the extruder path?

15 A. The cooling trough and assembly of
16 the machine itself or the time?

17 Q. From when the process starts, the
18 very first part, I guess, where the materials
19 are being placed into the machine to when they
20 are done cooling and ready to go for
21 cross-linking, how far has a particular point
22 on a piece of pipe traveled?

23 A. Distance is what you're asking
24 for?

25 Q. Yes.

1 A. Maybe about 50 feet. I haven't
2 actually measured a specific length.

3 Q. Fifty feet, and you said it moves
4 at about 60 to 80 feet per minute?

5 A. Yes. Maybe a little bit longer
6 than 50 feet. Maybe about 100 feet. I haven't
7 specifically measured those extruders. I don't
8 know for certain.

9 Q. So then if it's about 100 feet and
10 the extruder is moving at 60 to 80 feet per
11 minute, does it then take somewhere around one
12 and a half to two minutes to complete the
13 process?

14 MR. KUHLMAN: Object to the form.

15 THE WITNESS: Well, for that
16 particular section of tubing, yes, but, I mean, a
17 reel may be in the process of manufacturing for
18 hours. I mean, an entire shift if you have
19 40,000 feet.

20 BY MR SHAMBERG:

21 Q. Sure. And I guess -- so maybe my
22 question wasn't so clear. Let's say, you know,
23 one particular six-inch piece of the pipe, I
24 guess, from when, you know, you're starting
25 there and then when that piece of pipe is

<p style="text-align: right;">Page 54</p> <p>1 finished with extrusion process. That would be 2 a couple minutes, around? 3 A. Roughly. 4 Q. What temperature was the 1006 5 tubing extruded at? 6 A. I don't remember the exact 7 temperature. 8 Q. Okay. Do you remember a ballpark 9 or an estimation? 10 A. I don't. There are about four 11 different heating zones on an extruder machine, 12 but I don't remember the exact settings. 13 Q. Do you recall what temperature the 14 reformulated pipe, the 3308 pipe, was extruded 15 at? 16 A. I really do not. 17 Q. Do you know what impact, if any, 18 the extrusion temperature can have on the 19 performance of the tubing in the field? 20 A. I do not. That's outside the 21 realm of my responsibilities. 22 Q. Okay. And then regardless of what 23 the temperature is, and let's focus on the 1006 24 pipe for now, do you know what length of time 25 the pipe remains at that temperature while it's</p>	<p style="text-align: right;">Page 56</p> <p>1 Q. Do you know whether the extrusion 2 temperature can have an impact on the quality 3 of the finished product for PEX-C tubing? 4 A. I mean, those are engineering 5 questions that are really outside of my 6 expertise. 7 Q. Okay. That's not a discussion you 8 had with anyone in engineering at NIBCO? 9 A. Not that I've had. 10 Q. Okay. Are you familiar with the 11 standard that's referred to as ASTM F876? 12 A. Yes. 13 Q. Can you describe what that 14 standard requires? 15 A. The standard basically requires -- 16 I mean, it outlines dimensions of burst 17 strength and other parameters that identify a 18 product as PEX. I mean, it specifies the 19 industry test methods on which our laboratory 20 testing is based and also tests for which 21 agencies, listing agencies, conduct annual 22 certification testing as well. 23 Q. Does ASTM F876 include any 24 standards for chlorine resistance? 25 A. Yes.</p>
<p style="text-align: right;">Page 55</p> <p>1 being extruded? 2 A. Unfortunately, I don't. 3 Q. Who might know that at NIBCO? 4 A. That -- my guess would be the 5 product engineer at the time. 6 Q. Do you recall who the product 7 engineer was at the time that NIBCO acquired 8 CPI? 9 A. I don't want to speculate on that. 10 I mean, there were individuals that I worked 11 with, but I don't recall specifically whose 12 title was what at that time. 13 Q. Throughout your tenure at NIBCO, 14 do you recall the names of any individuals who 15 you believe would be responsible -- would be -- 16 strike that. Do you recall the names of anyone 17 who during your time at NIBCO would have known 18 what temperature the PEX-C tubing was extruded 19 at? 20 A. I don't know who specifically 21 would have known that. I mean, there were 22 individuals that I worked with that, you know, 23 had an engineering function, but I don't know 24 specifically if they were the individuals that 25 would have known that.</p>	<p style="text-align: right;">Page 57</p> <p>1 Q. What are those standards for 2 chlorine resistance? 3 A. There's a standard 2023 which 4 basically specifies that there is a 50-year 5 minimum that the tubing must meet. And that 6 testing would be done by a listing agency. 7 Q. Okay. So is the chlorine 8 resistance requirement in 876 or is it in the 9 2023 standard that you mentioned? 10 A. The 2023 standard is the actual 11 method itself. The requirement would be in 12 876. And the requirement would have been what 13 was stated at that particular time of 14 manufacture. Those standards have changed over 15 the years. Again, at the time I started, there 16 was no standard that was in effect at that 17 time. 18 Q. Right. The standard came in at 19 some point after you began at CPI? 20 A. I don't remember what particular 21 year. I don't remember what year it appeared 22 on the ASTM standard. And I believe that it 23 appeared prior to them enforcing the standards. 24 I don't have dates for that. 25 Q. Has NIBCO ever manufactured PEX-C</p>

<p style="text-align: center;">Page 58</p> <p>1 tubing with an outer diameter that exceeded the 2 maximum diameter permitted under ASTM F876?</p> <p>3 MR. KUHLMAN: Object to form.</p> <p>4 THE WITNESS: If there was a 5 measurement that was outside of the 6 specifications, that product would have been put 7 on hold.</p> <p>8 BY MR SHAMBERG:</p> <p>9 Q. So that was going to be my next 10 question. If the quality assurance testing 11 reveals a maximum diameter greater than what's 12 permitted under ASTM F876, what does NIBCO do?</p> <p>13 A. If the product is in excess of the 14 specification and it does not meet specs, it 15 would be scrapped and -- quarantined and 16 scrapped.</p> <p>17 Q. And is that true in all instances?</p> <p>18 A. To the best of my knowledge.</p> <p>19 Q. Are you aware of any instances 20 where pipe that exceeded that maximum diameter 21 was observed but the pipe was not scrapped?</p> <p>22 A. The plant manager would have had 23 the ultimate authority. I can't recall any 24 specific times. Not to my knowledge at this 25 time.</p>	<p style="text-align: center;">Page 60</p> <p>1 manager -- or was the vice president. Vince 2 Pulles was the HR manager who kind of was the 3 senior manager at our site. And Larry 4 Smallwood was the operations manager.</p> <p>5 Q. Were you on the leadership team at 6 that time?</p> <p>7 A. I was not considered -- I mean, 8 when NIBCO took our company over, I became 9 coordinator rather than a manager, so I wasn't 10 considered part of a management team.</p> <p>11 Q. So with respect to the ultimate 12 disposition of any out of specification pipe at 13 NIBCO, did you have any role in making that 14 determination?</p> <p>15 A. I would put the product on hold 16 and I would make my recommendations. You know, 17 if it doesn't meet spec, then my recommendation 18 would be that the product is scrapped.</p> <p>19 Q. Was that true in every instance? 20 In other words, do you recall an instance when 21 a product was out of specification and you 22 didn't recommend that it be scrapped?</p> <p>23 A. I can't recall.</p> <p>24 Q. At what point in the manufacturing 25 process are these dimensional checks performed?</p>
<p style="text-align: center;">Page 59</p> <p>1 Q. So it may have occurred, but it's 2 not something you are aware of?</p> <p>3 A. It's not something that I could 4 testify to at this time.</p> <p>5 Q. You said the plant manager would 6 be the one to make that decision?</p> <p>7 A. Under CPI, yes.</p> <p>8 Q. Under CPI. What about for NIBCO?</p> <p>9 A. For NIBCO, it would have been a 10 leadership team decision.</p> <p>11 Q. Would that be the leadership team 12 at Lebanon?</p> <p>13 A. Yes.</p> <p>14 Q. And Lebanon, Ohio, is where the 15 manufacturing site is located, is that correct?</p> <p>16 A. Yes.</p> <p>17 Q. In the year following NIBCO's 18 acquisition of CPI, so let's say 2006 to 2007, 19 who was on that leadership team?</p> <p>20 A. It's been a while. There was a 21 general manager and an HR manager and an 22 operations manager. Do you want specific 23 names?</p> <p>24 Q. Yes.</p> <p>25 A. Chris Mason was the general</p>	<p style="text-align: center;">Page 61</p> <p>1 A. They're performed at several 2 points in the process. They're performed at 3 the time of extrusion, in which it's not PEX. 4 It would still be PE material. They're 5 performed after the E-BEAM process. They're 6 also performed after the cut, coil, and mark 7 process. So three different times the 8 measurements are taken.</p> <p>9 Q. Okay. And we previously talked a 10 little bit about how long the extrusion process 11 takes. When the extrusion process is complete, 12 how much time passes before that PE pipe is 13 cross-linked?</p> <p>14 A. I'm not aware of any set standard 15 for time in which it has to occur. There is a 16 contract that we have that gives E-BEAM a 17 certain number of days in which a job has to be 18 completed, and then also there's the demand -- 19 customer demand for particular sizes and 20 colors. My estimate is maybe about two weeks, 21 but it's not necessarily a hard written in 22 stone time frame.</p> <p>23 Q. So that's -- and I understand that 24 it's not going to be the same in every 25 instance. But that two weeks that you</p>

1 mentioned --
 2 A. Roughly.
 3 Q. -- that's from -- that's the time
 4 period from when the extrusion process is
 5 complete to when the cross-linking process
 6 begins?
 7 A. To when the cross-linking is
 8 completed.
 9 Q. Okay. So my question was a little
 10 different. I appreciate that, though. My
 11 question is how long is the time period from
 12 when extrusion is completed until the
 13 cross-linking begins?
 14 A. The cross-linking is done
 15 relatively quickly, within maybe 45 minutes to
 16 an hour, so it's close to the same length of
 17 time.
 18 Q. That was going to be my next
 19 question. That makes sense, how long the
 20 cross-linking process takes. About an hour,
 21 maybe a little less?
 22 A. With the mounting and unmounting
 23 on the fixtures, maybe slightly more. And then
 24 the actual cross-link process itself is maybe
 25 about 45 minutes per reel.

1 that would be correct, but it varies. Like I
 2 said, there's no specific time.
 3 Q. How long does that cutting,
 4 coiling, and marking process actually take to
 5 complete, just that part?
 6 A. It depends on how large the order
 7 is that they're running. It depends -- they
 8 may run out an entire reel. I don't know the
 9 footage per minute that they ran at, but, you
 10 know, it could take a couple of hours. It
 11 could take a couple of shifts. It may take a
 12 couple of days. It just depends on what size
 13 they're running and how large the order.
 14 Q. So the dimensional checks per
 15 ASTM F876 are performed after extrusion, after
 16 cross-linking, and after the cut, coil, and
 17 mark, is that accurate?
 18 A. For the quality laboratory, yes.
 19 Our production staff also do quality checks as
 20 well.
 21 Q. Okay. When do those production
 22 staff quality checks occur?
 23 A. They do it at startup just to make
 24 sure that they're inspected at the time that
 25 they initiate production. They also check at

1 Q. We're talking about a matter of a
 2 few hours rather than days or weeks?
 3 A. Yes.
 4 Q. And then again you mentioned the
 5 cut, coil, and mark process at the end. How
 6 much time lapses between when the pipe is
 7 finished with the cross-linking process and the
 8 cutting, coiling, and marking process begins?
 9 A. There's no set amount of time.
 10 Basically, it depends on our order levels, what
 11 our customers order, you know, and it can vary.
 12 Q. So what would be kind of the low
 13 and the high end of time?
 14 MR. KUHLMAN: Object to form.
 15 THE WITNESS: The low is it could
 16 begin on the same day that the cross-linking is
 17 complete. I don't have an estimate for the high.
 18 You know, I could say most product probably gets
 19 processed within a couple of weeks of manufacture,
 20 but beyond that, I don't have any specifics.
 21 BY MR SHAMBERG:
 22 Q. Okay. So maybe sort of similar to
 23 between extrusion and cross-link, maybe in a
 24 couple weeks?
 25 A. For the faster moving products,

1 the end of extrusion. We also check that
 2 point, too. Periodically, they'll use calipers
 3 and Pi tape. And what they're checking as
 4 they're running, there's no specific time
 5 interval for that. They just periodically are
 6 making sure that their product is maintained
 7 within the spec.
 8 Q. So then going back to the actual
 9 quality control test, the nonproduction staff
 10 testing, the quality lab, the quality assurance
 11 testing, because I think you mentioned a time
 12 period between the different phases of
 13 manufacturing, you know, extrusion,
 14 cross-linking, and cutting, coiling, and
 15 marking can vary depending on the order, is it
 16 also true that the time when those checks are
 17 performed can also vary?
 18 A. For quality, no. We test at the
 19 beginning and the end of each reel and
 20 extrusion. Like I said, we test when the reel
 21 comes back from E-BEAM and during the cut,
 22 coil, and mark processes. Usually there are
 23 several setups per individual reel. We test
 24 first article inspections for each of those as
 25 well. So, I mean, there are multiple points

1 within each reel or lot that are tested.
 2 Q. Okay. So you had mentioned
 3 earlier, say, for example, that the time
 4 between cross-linking and cutting, coiling, and
 5 marking could be the same day or it could be a
 6 few weeks, right? Depending on the particular
 7 order?

8 A. Right.

9 Q. So does that also mean that even
 10 if the quality control testing is performed at
 11 the same point in the process, that test could
 12 be performed within a range of a few weeks of
 13 time?

14 A. Yes. I mean, there are different
 15 tests and different data collection records for
 16 each, but all of the tests for one reel are not
 17 necessarily done on the same day. They're done
 18 on the days that particular processing steps
 19 are undertaken.

20 Q. Okay. What is a die line?

21 A. A die line would be a visible line
 22 in the tubing that -- basically when the molten
 23 material flows through a die, it would not at
 24 that point -- if you have an ideal process once
 25 the tube is formed, you don't see the residual

1 of where that die lines or the product went
 2 through that die. In some cases, you know, if
 3 you have a process -- in a few cases there may
 4 be evidence of where that die line occurred.
 5 Sometimes they're extremely minor and
 6 superficial. Sometimes, you know, in rare
 7 cases they can be more severe than that.

8 Q. And can you just explain a little
 9 bit again how a die line forms during the
 10 extrusion process?

11 A. Basically, it's where the product
 12 would knit together after going through a die
 13 on the extruder device.

14 Q. And the die, is that a colorant or
 15 is that different?

16 A. No. It's like a -- it's like a
 17 metal piece that molten product flows through
 18 as it's exiting the extruder.

19 Q. So what I'm picturing in my head,
 20 when I was a kid, I used to play with Play-Doh.
 21 And you'd push it down and it would squeeze it
 22 out through kind of a metal sluis (phonetic).
 23 Is it like that or is that totally off base?

24 A. There's some similarity. You
 25 know, if it flows through a grid or a die line,

1 you know, if it comes out where you can see the
 2 point where that die sliced through the
 3 material, then you would have a die line. If,
 4 you know, the product was molten when it
 5 formed, then you would not see that.

6 Q. All right. I'm just trying to get
 7 a visual on how it looks.

8 A. But I am not an extrusion expert.
 9 You know, that's going into an engineering area
 10 that, you know, I don't want to speculate on
 11 outside of the realm of my responsibility.

12 Q. Okay. But you are responsible for
 13 ensuring the quality of the finished product,
 14 right?

15 A. That's correct.

16 Q. Do you know what causes die lines
 17 to form?

18 A. I don't know all the causes for
 19 die lines.

20 Q. Do you know some of them?

21 A. I don't want to speculate on that.

22 Q. Okay. So no then? In other
 23 words, no, you don't know what causes die lines
 24 to form?

25 A. Not to give an answer in this

1 context, no, I don't.

2 Q. What context would you be able to
 3 give the answer?

4 A. I don't have the experience to
 5 give you an answer to that question. I cannot
 6 answer that question.

7 MR. KUHLMAN: Kyle, when you get to a
 8 reasonable stopping place, can we take a
 9 five-minute break? We've been going for, what, an
 10 hour?

11 MR SHAMBERG: Yeah. This is actually
 12 probably a good time.

13 (Pause in proceedings.)

14 BY MR SHAMBERG:

15 Q. Ms. Premus, to your knowledge, has
 16 NIBCO had any problems with its manufacturing
 17 process of PEX tubing over the years?

18 MR. KUHLMAN: Object to form.

19 THE WITNESS: Can you specify what
 20 types of problems you're inquiring about?

21 BY MR SHAMBERG:

22 Q. Defects in the finished product.

23 MR. KUHLMAN: Object to form.

24 THE WITNESS: I mean, all
 25 manufacturers have periodic issues that come up in

1 manufacturing processes, which is why you have a
 2 quality control. I've not seen them to an extent
 3 that wouldn't be normal in any process.

4 BY MR SHAMBERG:

5 Q. Okay. What were some of the
 6 defects that you've observed with the
 7 manufacturing process of PEX-C tubing?

8 A. PEX-C tubing, occasionally you
 9 would have a shrinkage of OD or out of round
 10 based on tension that occurs in the process. I
 11 mean, they're not frequent, but, I mean, they
 12 occasionally can occur. That's what our
 13 measuring and testing process is to detect.

14 Q. Have you ever raised any concerns
 15 about potential problems with the manufacturing
 16 process for PEX-C tubing with your superiors at
 17 NIBCO?

18 MR. KUHLMAN: Object to form.

19 THE WITNESS: I mean, from a quality
 20 perspective, and there have been a lot of
 21 changes -- not changes, but improvements, you
 22 know, in our documentation system over -- you
 23 know, it's been 12 years since I've been working
 24 for the organization. I mean, I'm always looking
 25 for ways that we can do things better. You know,

1 I raise those suggestions when they come or when
 2 the opportunity arises.

3 BY MR SHAMBERG:

4 Q. Okay. Do you recall any specific
 5 instances in which you did that?

6 A. Not off the top of my head.

7 (Thereupon, Plaintiffs' Exhibit 2,
 8 email chain Bates stamped NIBCO-Cole 00039212
 9 through NIBCO-Cole 00039213, was marked for
 10 purposes of identification.)

11 BY MR SHAMBERG:

12 Q. Ms. Premus, just take a look at
 13 that and I'll ask you questions about it.

14 A. Okay.

15 Q. So Ms. Premus, I've handed you a
 16 document that bears the Bates label NIBCO-Cole
 17 00039212, and on the first page of this
 18 document at the bottom there's an email from
 19 you to Chris Mason with the subject line
 20 quality issue that needs attention?

21 A. Yes.

22 Q. Do you recall writing this email?

23 A. Honestly, I don't. Obviously, I
 24 did, but I had forgotten about this.

25 Q. Okay. So even though you may not

1 remember it, you do believe you wrote this
 2 email at the time, correct?

3 A. It appears to have come from me.
 4 I don't recall having written it.

5 Q. And if you turn to the second page
 6 of this document, in the full paragraph at the
 7 top, you mention a leadership meeting that
 8 Larry was in attendance at. Again, is that
 9 Larry Smallwood?

10 A. Yes.

11 Q. And that leadership meeting, was
 12 that a meeting of the leadership team that we
 13 had discussed previously?

14 A. It would have been at the time --
 15 Larry Smallwood is the highest level manager on
 16 site, and then with the supervisors of various
 17 areas like myself, extrusion, post processing,
 18 distribution.

19 Q. Okay. Do you recall the
 20 individuals who were in attendance at that
 21 leadership meeting?

22 A. You know, we've had some changes
 23 in personnel. I personally can't speculate on
 24 that particular date. For example, one of our
 25 extrusion supervisors is deceased. I don't

1 remember what year it is. Those positions have
 2 changed periodically.

3 Q. Okay. So with respect to this
 4 particular meeting that you're referencing in
 5 this email, other than yourself and Larry
 6 Smallwood, you're not able to identify anyone
 7 else who would have been in attendance?

8 A. I could tell you the positions
 9 that should have been in attendance, but I
 10 can't identify -- I mean, I don't even remember
 11 having written this, it's been so long. I can
 12 tell you the positions that should have been in
 13 attendance, but I can't tell you who or if they
 14 were actually there.

15 Q. Okay. In this email you're
 16 raising an issue as to the calibration of
 17 NIBCO's extruders, is that fair?

18 A. The way the email's written,
 19 that's correct.

20 Q. And you say that when you raised
 21 the issue at the leadership meeting, Larry
 22 Smallwood was again resistant, and you say that
 23 that was consistent with the periodic rebuffs
 24 that you've been receiving on this issue. Can
 25 you describe for me what those periodic rebuffs

1 were?

2 A. Honestly, I can't. The only thing
3 I can say is that Larry had kind of a very
4 flamboyant sometimes touchy temper, and it's
5 obvious that I had a disagreement with my boss
6 and I went to his one-up.

7 Q. So then when you say I don't want
8 to be in a position to create friction with my
9 boss, your boss was Larry Smallwood?

10 A. That's correct.

11 Q. Okay. Aside from this email which
12 I understand you don't, sitting here, recall
13 writing, do you have a memory of raising these
14 calibration issues with Larry Smallwood at the
15 time?

16 A. I have a memory, and it's been
17 many years. My memory is not clear at that
18 point anymore. I remember asking the question
19 about calibration, and I remember asking the
20 question if -- probably, I was looking for
21 documentation, which is part of my role as far
22 as like maintaining documentation of company
23 records and stuff. I don't remember
24 specifically why the issue came up, but I
25 remember questioning, you know, how often we

1 did it and where the documentation was. And
2 that probably is the situation here. I just
3 didn't remember specifically this.

4 Q. So you saw a potential concern and
5 you were trying to raise that concern to your
6 boss, is that fair?

7 A. That's correct.

8 Q. And he was not being particularly
9 receptive, is that fair?

10 A. Based on the information in this
11 email, that apparently was my perception at the
12 time.

13 Q. And, again, I understand that you
14 don't remember the specific contents of the
15 email, but you also mentioned here after
16 talking about those periodic rebuffs that
17 you're concerned that it's putting the company
18 at risk?

19 MR. KUHLMAN: Object to form.

20 BY MR SHAMBERG:

21 Q. So my question about that is what
22 risks were you concerned about at the time?

23 A. I don't believe I could give an
24 answer. First of all, so much time has passed,
25 I don't know what my train of thought was at

1 the time. If I had to speculate, you know,
2 knowing that from a quality control perspective
3 generally, you know, a process -- basically, it
4 was probably looking for documentation of a
5 process and that that process was within
6 standard.

7 Q. Do you recall being concerned that
8 potential drift in the extruders could lead to
9 chlorine resistance problems?

10 A. It looks like I was speculating in
11 this particular email. I don't recall ever
12 having seen any evidence to say that that
13 occurred. But, you know, I was simply looking
14 for documentation, doing my job. I felt I
15 didn't apparently get the response from my
16 supervisor that I needed, and I went to his
17 one-up looking for that documentation.

18 Q. So you just wanted somebody who
19 would address the concern and resolve the
20 issue, right?

21 A. That would be correct. I mean, I
22 didn't have any apparent evidence that any
23 issue was, in fact, occurring. I just wanted
24 that documentation because I felt that it was
25 important to the quality process.

1 Q. And then on the first page here,
2 Chris Mason responds to the email and says we
3 will talk tomorrow. Do you recall ever talking
4 to Chris Mason about this calibration issue?

5 A. Honestly, like I said, I don't
6 remember writing the letter. I mean, it
7 obviously occurred. It's just been so long it
8 just is out of my memory. I don't recall if or
9 what. I'm assuming, you know -- if there
10 weren't additional emails, I'm assuming the
11 meeting probably happened. I don't know. I
12 don't remember. I know that our plast controls
13 are calibrated down. That's, you know,
14 something that was obviously addressed.

15 Q. Okay. So at some point between
16 the time of this email exchange and today these
17 calibration concerns were addressed and fixed
18 to your knowledge?

19 A. Yes. You know, again, it's just
20 the documentation. You know, I don't know that
21 the service didn't occur. I just didn't have
22 the documentation based on this email.

23 Q. So it was simply the lack of
24 documentation that you were concerned was
25 putting the company at risk?

1 A. You know, like I said, I don't
 2 recall having written this. That appears to be
 3 what flagged my attention based on this email
 4 that I just reviewed.

5 Q. So if this calibration issue was
 6 ultimately addressed and fixed, you just don't
 7 know when that would have happened?

8 A. Not to my recollection.

9 Q. You weren't involved in that?

10 A. I just can't remember the process,
 11 it's been so long.

12 Q. Okay. So you may have been, but
 13 it's just --

14 A. If it were still an issue --

15 Q. -- you can't recall?

16 A. -- I would probably still be
 17 raising the concern. I just don't remember.

18 Q. Okay. Last question on this. Do
 19 you have a specific memory here of anyone at
 20 NIBCO informing you that the calibration issue
 21 discussed in that email had been fixed?

22 A. I couldn't even speculate. I
 23 don't know.

24 (Thereupon, Plaintiffs' Exhibit 3,
 25 Inter-Office Confidential Memo to Debbie Premus

1 and Pat Borgerding from Vince Pulles, was marked
 2 for purposes of identification.)

3 BY MR SHAMBERG:

4 Q. So, Ms. Premus, I've handed you a
 5 document. Although it's not revealed on this
 6 copy, I'll represent that this is NIBCO-Cole
 7 00036399. And this is a memo from Vince Pulles
 8 to yourself and to Pat Borgerding, is that
 9 correct?

10 A. Yes. Yeah. I don't see the
 11 number of the document on here.

12 Q. You'll have to just trust me that
 13 that's right, and I'm just making it for the
 14 record. Who is Pat Borgerding?

15 A. He was the operations manager at
 16 the time. He was responsible for extrusion.
 17 Actually, his title might have actually been
 18 extrusion manager. I don't remember the exact
 19 title.

20 Q. Is he someone who might be
 21 knowledgeable about the questions I was asking
 22 related to the temperature at which the pipe is
 23 extruded? Would that have fallen within his
 24 responsibilities as extrusion manager?

25 A. Potentially.

1 Q. Is he still with NIBCO?
 2 A. No, he's not.
 3 Q. And Vince Pulles, I think you
 4 said, was the head of HR?

5 A. Human resources manager.
 6 Q. Okay. And he was on the
 7 leadership team at Lebanon?

8 A. Yes.

9 Q. So, first of all, do you recall
 10 receiving this memo?

11 A. I don't specifically recall
 12 receiving it, but I recall dealing with the
 13 situation.

14 Q. Okay. What was the situation?
 15 A. The situation was that we had a
 16 manufacturing defect that was occurring in
 17 one-inch pipe.

18 Q. Okay. And I believe Vince Pulles
 19 identifies that -- he identifies the primary
 20 reason is charred plastic resin and resulting
 21 pinholes?

22 A. Yes.

23 Q. Is that accurately what he states?

24 A. Yes. And it's not the same as the
 25 oxidative failures that we were discussing

1 before. This is an actual defect that
 2 occurred -- it's a separate, unrelated defect
 3 that occurred at the time of manufacture.

4 Q. Okay. So he says we need to get
 5 to the root cause of the pipe failures and make
 6 certain we minimize them going forward. Do you
 7 have an understanding as to what that root
 8 cause was?

9 A. Yes. We believe it to be that
 10 they needed to improve their clean-out
 11 procedure on the extruders, possibly -- I don't
 12 remember all the details at this time, but
 13 possibly there was a change of personnel and
 14 they weren't cleaning them as thoroughly as
 15 they needed to. One of the things that we did
 16 was went to 100 percent pressure testing of all
 17 sizes to make sure that none of these
 18 defects -- I mean, it would have been detected
 19 either in the plant or they would have been
 20 detected during the pressure testing in the
 21 installation because it was something that was
 22 present at the time that the pipe would have
 23 went out the door. We tested 100 percent to
 24 make sure that we caught those and also put in
 25 place a new clean-out procedure for the

1 extruders with a specified frequency to make
2 this go away.

3 Q. Okay. These pinhole problems that
4 are discussed in this memo, they affected, at
5 least according to the memo, over 100,000 feet
6 of the tubing?

7 A. Yes.

8 Q. So then in this memo Mr. Pulles
9 lists action steps that need to be taken as 1
10 through 7. And number 6 says, Debbie to check
11 the records, conduct an audit, and occasionally
12 observe the clean-out process. All records are
13 kept in quality department. Need an audit
14 system in place. So at the time that this memo
15 was written, was there a system -- was there an
16 audit system in place to detect the clean-out
17 issues that you've mentioned?

18 A. There was a data collection record
19 to record the clean-outs that occurred on the
20 machines, you know, and periodically as we
21 walked out and collected our samples, we would
22 check those sheets to make sure that they were
23 being filled out, you know, according to the
24 interval specified in the procedure. There's a
25 written procedure that was developed that

1 specified those intervals.

2 Q. When was that procedure developed?

3 A. I don't remember the exact date,
4 but it was in response to this.

5 Q. Do you recall when it was
6 implemented?

7 A. I don't remember the date without
8 it being in front of me.

9 Q. To your knowledge, did this
10 charred plastic resin and pinhole issue affect
11 other reels of pipe other than those identified
12 in this document?

13 A. It was something that had
14 sporadically occurred. I think there was some
15 additional pipe. I can't remember specifically
16 what or how much. But those would have been
17 caught during pressure tests. And when you say
18 100,000 feet affected, it's an intermittent
19 problem, not necessarily 100,000 feet, but
20 there may be several spots within that length
21 of tubing that this might have occurred.

22 Q. But that 100,000 feet still had to
23 be scrapped in its entirety?

24 A. Yes.

25 Q. Are you aware of any other issues

1 aside from the charred plastic resin issue
2 identified in this memo? Are you aware of any
3 other issues with pinholes being formed in PEX
4 tubing during the manufacturing process?

5 A. Not to my knowledge. And, again,
6 this is distinctly different than an
7 oxidative-type failure. This would be
8 something that would be present at the time of
9 manufacture, not something that develops later
10 after installation.

11 Q. Had this pipe been sold to market,
12 do you believe that it would have failed
13 prematurely in the field?

14 MR. KUHLMAN: Object to form.

15 THE WITNESS: I don't believe there's
16 any evidence suggesting that. If the plumber --

17 MR. KUHLMAN: Are you talking about
18 this tubing?

19 MR SHAMBERG: Yes. Let me clarify
20 that.

21 BY MR SHAMBERG:

22 Q. If the 100,000 or so feet of
23 tubing being discussed in this memo that was
24 scrapped had been sold in the market, would
25 that pipe have failed prematurely in the field?

1 A. As long as it passed the initial
2 pressure test, meaning that there were no
3 pinholes in the actual footage that was
4 installed, there would be no evidence that
5 would suggest that it would fail prematurely.
6 I mean, the issue was the fact that there were
7 pinholes in the product that were a
8 manufacturing defect in this case.

9 I mean, if the plumber did a
10 pressure test and showed that the system wasn't
11 leaking, then it would have probably performed
12 like normal PEX. But, you know, as a
13 precaution, you know, we recognized that there
14 was a manufacturing issue, and we scrapped the
15 product.

16 Q. And you think you caught all of
17 it?

18 A. To the best of our ability, I
19 believe we caught, you know, as much as we
20 could.

21 Q. Okay. We'll do one more document
22 that I'll have some questions about.

23 (Thereupon, Plaintiffs' Exhibit 4,
24 email chain Bates stamped NIBCO-Cole 00032068
25 through NIBCO-Cole 00032072, was marked for

<p>1 purposes of identification.) 2 BY MR SHAMBERG: 3 Q. Okay. Ms. Premus, I handed you 4 had a document that's Bates stamped NIBCO-Cole 5 00032068. Have you had a chance to review the 6 document? 7 A. Yes. 8 Q. In 2011 were failures in PEX-C 9 tubing occurring due to pinholes created during 10 the cross-linking process? 11 A. According to this memo, now I 12 recall, yes. 13 Q. Why was that occurring? 14 A. Actually, for similar reason that 15 we saw them with the char, and that's to my 16 knowledge particulates, the presence of 17 particulates in the formulation. 18 Q. Okay. What are particulates? 19 A. Just basic like a particle, but, 20 again, this is not the same as an 21 oxidative-type failure. It's an issue that 22 occurs at the time of manufacture. 23 Q. So there were particles present in 24 the colorant that were causing the pinholes to 25 form when the pipe was cross-linked?</p>	<p>1 A. Basically, it was to increase it. 2 And the energy is not the dose. It governs the 3 depth of penetration. 4 Q. Okay. And we're going to get into 5 that, but let me just ask now since you 6 mentioned it. What is the significance of the 7 dose of cross-linking? What does the dose -- 8 A. The dose -- 9 Q. -- indicate? 10 A. -- would basically relate to the 11 degree, the percentage of cross-linking. There 12 is a specification for PEX that it has to fall 13 between 65 and 89 percent to meet standard for 14 PEX tubing, and so you basically have to 15 determine the dose that you need to apply to 16 achieve that portion of the specification. 17 Q. Okay. Is that dose measured in 18 something referred to as Mrads? 19 A. Megarads, correct. 20 Q. Megarads or Mrads? 21 A. Yes. 22 Q. Okay. And then the energy 23 separate from the dose is quantified in 24 megavolts or MEV? 25 A. That's correct. Million electron</p>
<p>1 A. That was the theory, correct. 2 Q. Okay. Is that the theory that 3 you, on the very first page of this document in 4 your email to Will Mitchell, you discuss a 5 hypothesis that you have about why there 6 appears to be a color difference? Is that also 7 what you're discussing there? 8 A. Yes. 9 Q. Okay. Was that hypothesis ever 10 tested to determine whether it was accurate? 11 A. Basically, I mean, other than 12 understanding the composition, chemical 13 composition of the colors, which I described in 14 the email, I mean, I'm not sure that there's a 15 way of testing. I just summarized test data 16 and the results of a process change that we 17 used to eliminate some of the issues that we 18 were seeing. 19 Q. Okay. Well, what was the process 20 change that was implemented? 21 A. The process change was to make a 22 change in the beam energy, the electron beam 23 energy during the processing. 24 Q. Okay. Was it to increase or 25 decrease the energy?</p>	<p>1 volts. 2 Q. Million electron volts. Okay. So 3 MEV relates to the energy; megarads relate to 4 the dose? 5 A. Yes. 6 Q. Okay. Was NIBCO also experiencing 7 pinholes caused by the cross-linking process in 8 2012? 9 A. Not that I recall -- or wait a 10 minute. This is -- well, obviously, yeah, 11 based on this data here. 12 Q. So this particular issue with the 13 cross-linking causing the pinholes was 14 occurring in both 2011 and 2012, according to 15 this document? 16 A. Yes. I just don't remember all 17 the details because it's been a long time. 18 Q. But that change to increase the 19 energy of the cross-linking process, do you 20 recall when that change was implemented? 21 A. I mean, I know obviously that it 22 was. I don't recall the dates. 23 Q. In your email, the second from the 24 top on the first page, it's dated Thursday, 25 November 29, 2012, at 9:18 a.m. You say, one</p>

1 thing that I didn't mention is once we have
 2 enough Dow formulation data, we may want to
 3 revisit the 4.25 MeV increase for one-inch
 4 material. So does that mean that the energy
 5 increase you're talking about hadn't occurred
 6 as of that date?

7 A. No. Actually, the pinhole issue
 8 that I was referring to was exclusively with
 9 the PEX 1006 formulation. The Dow formulation
 10 was not PEX 1006. It was a different
 11 generation product that I was referring to,
 12 just saying we may want to revisit to see if we
 13 need it for that new generation product as
 14 well.

15 Q. So at some point prior to when you
 16 wrote this email, a 4.25 megavolt increase had
 17 been implemented for the 1006 pipe, is that
 18 accurate?

19 A. I believe so. I don't have any
 20 information about the date in front of me.
 21 Like I said, the Dow is a totally different
 22 product. Not the same as PEX 1006.

23 Q. Right. So you're saying the
 24 reformulated product may not suffer from the
 25 same issues, and therefore the increase in

1 PEX-C is irradiation.

2 Q. Irradiation?

3 A. Mm-hmm.

4 Q. How does that work?

5 A. Basically, the tube is put up on a
 6 fixture, and it's spooled off of that -- it's
 7 basically reeled off of the spool that it's on.
 8 It wraps in a figure eight around the fixture
 9 underneath the scan horn and an electron beam,
 10 which the constant dose of radiation is
 11 applied, and then it's spooled out of the beam
 12 and taken up on an uptake fixture.

13 Q. Is the tubing moving during the
 14 cross-linking process?

15 A. Yes. Yes.

16 Q. Okay. I --

17 A. I mean, it's being unspooled going
 18 in a figure eight pattern and then coming back
 19 to an uptake reel.

20 Q. At what speed is that unspooling
 21 occurring?

22 A. You know, I don't remember the
 23 exact speed. There was a maximum spec that
 24 listed like 900 feet per minute, but it was not
 25 run at that. It was run much slower than that.

1 energy that was implemented to attempt to fix
 2 it may not be necessary, is that -- I'm just
 3 trying to understand kind of what you're
 4 conveying with this.

5 MR. KUHLMAN: Object to form.

6 THE WITNESS: It looks like from what
 7 I wrote here that I was uncertain whether or not
 8 it would apply to the different formulation.

9 BY MR SHAMBERG:

10 Q. But do you believe the energy
 11 increase had occurred for the 1006 pipe at some
 12 point prior to the date of that email?

13 A. Honestly, I don't remember the
 14 date that it occurred.

15 Q. Okay. So we talked a bit about
 16 the extrusion process of manufacturing. Now
 17 we're going to get into cross-linking. I want
 18 to ask you a little bit more about that
 19 cross-linking process. So we've touched on it
 20 before, but, again, what is cross-linking?

21 A. Basically --

22 Q. Sorry. Sorry. What is
 23 cross-linking -- what is the cross-linking
 24 process for PEX-C tubing?

25 A. The cross-linking process for

1 I don't remember what the foot per minute
 2 actual is.

3 Q. And no estimate? Just something
 4 fewer than 900?

5 A. Yeah. Significantly less. I just
 6 don't remember what it was.

7 Q. Is the tubing beamed on all sides
 8 during that process?

9 A. Yes. The fixture -- there's a
 10 series of two drums that are in that electron
 11 beam facility, and basically there are fingers
 12 that are offset that provide the tracks, and
 13 that product will form a figure eight, flipping
 14 back and forth as it runs under that beam
 15 multiple times prior to exit.

16 Q. Okay. So each -- I know when
 17 you're talking about circular pipe the word
 18 side might not be accurate, but let's just say
 19 each side of the pipe would receive a uniform
 20 dose?

21 A. I mean, it basically rolled when
 22 it's in there, so all surfaces would be exposed
 23 as it's running back and forth on the tracks.

24 Q. Okay. So based on what you've
 25 said, I think I already know the answer to this

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<p>1 question, but is the tubing in a state of 2 tension during the cross-linking process? 3 A. Yes. 4 Q. Is that true for the entirety of 5 the process? 6 A. Outside of the cross-linking 7 process? 8 Q. Sorry. Just -- is the tubing 9 under a state of tension throughout the entire 10 cross-linking process? 11 A. Yes. 12 Q. And then we have touched on this 13 before, but let's take, for example, just one 14 six-inch piece part of the tubing. How long 15 will that six-inch piece be undergoing the 16 cross-linking process, the E-BEAM process? 17 A. You know, I couldn't even begin to 18 estimate that. It depends on the speed at 19 which it's running. The pipe may wrap 45 times 20 around the fixture that's in the beam before it 21 finally estimates. I don't know. 22 Q. Regardless of what the specific 23 speed was, because I know you said you don't 24 recall exactly what it was, would the speeds 25 have varied or was the speed always uniform?</p>	<p>1 effect at higher temperatures. 2 Q. Okay. What would be higher 3 temperatures, like when would you start to see 4 the effect more pronounced? 5 A. I don't have an exact -- I mean, 6 I've never specifically researched that area. 7 I don't have an exact number to give you. 8 Q. Okay. Do you know if that 9 temperature would be within the range of what 10 might occur in a typical residential plumbing 11 application? 12 A. I don't know. 13 Q. Okay. I'm just trying to 14 understand if it's like 500 degrees or 15 something. 16 A. I don't know. 17 Q. Does cross-linking occur 18 instantly? In other words, when the tubing is 19 no longer going through the cross-linking 20 process itself, when it's not having the 21 electrons shot at it, is it still undergoing 22 chemical changes for some period of time 23 afterwards? 24 A. Not for PEX-C. 25 Q. Okay. So for PEX-C, when it's</p>

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<p>1 A. The only thing I can tell you was 2 it was slower for the larger diameter material 3 because it's more rigid than the smaller 4 diameter material, but I can't give you an 5 estimate other than that. I mean, you have to 6 run the larger diameter material more slowly so 7 that it doesn't come off of the fixture as it's 8 going through the beam. 9 Q. Why is PE pipe cross-linked? 10 A. Basically, I mean, the burst 11 strength is similar between the uncross-linked 12 and cross-linked. Basically, my understanding 13 is to give it more rigidity at higher 14 temperatures. 15 Q. More rigidity. So firing the 16 electrons at the pipe makes it more rigid? 17 A. Well, and plus the cross-linking 18 creates a stronger matrix between the molecules 19 in the tubing. 20 Q. So it strengthens the chemical 21 bond? 22 A. Yes. 23 Q. And the molecules in the tubing 24 itself? 25 A. Yes. And you'd see more of the</p>	<p>1 done being cross-linked, the process is done 2 and that pipe is in its final form the second 3 it comes off the spool? 4 A. I can't tell you if it's exactly 5 instant, but it happens very quickly and it's 6 cumulative with the PEX-C formulation. 7 Q. What do you mean cumulative 8 with -- 9 A. Cumulative, meaning that if you 10 dose it today, you get a certain response. If 11 you dose it again tomorrow, it will add to the 12 amount of cross-linking. 13 Q. Okay. I see. So it's not a case 14 where after it comes off the spool, it sits 15 there for six hours or something, and there are 16 still molecular changes occurring? 17 A. No. 18 Q. Can cross-linking tubing increase 19 resistance to creep rupture? 20 MR. KUHLMAN: Object to form. 21 BY MR SHAMBERG: 22 Q. Let me back up for a second. Are 23 you familiar with the term creep rupture? 24 A. I'm familiar with the term, but 25 that's outside my area of expertise and</p>

<p>1 responsibilities so I can't answer that 2 question.</p> <p>3 Q. So you wouldn't know one way or 4 the other?</p> <p>5 A. No.</p> <p>6 Q. Does the degree of cross-linking, 7 in other words, I guess, the -- well, you 8 mentioned there's an industry standard for 9 cross-linking that's for gel content that's 65 10 to 89 percent, is that right?</p> <p>11 A. Yes.</p> <p>12 Q. And how would you refer to that? 13 Is that the degree of cross-linking? I just 14 want to make sure we're using the right 15 terminology.</p> <p>16 A. That's what I would refer to it 17 as.</p> <p>18 Q. Does the degree of cross-linking 19 of PEX-C tubing affect that tubing's chlorine 20 resistance?</p> <p>21 A. Not to my knowledge. I mean, my 22 understanding of the standard is it has to be 23 within the window to be PEX, and I've never 24 seen anything that would tell me that it's 25 better to be at this number versus that number.</p>	<p>1 chlorine resistance would be a good or a bad thing 2 that I've seen.</p> <p>3 BY MR SHAMBERG:</p> <p>4 Q. What about being out of the spec? 5 If the tubing was out of the spec, say, 6 50 percent --</p> <p>7 MR. KUHLMAN: Object to form.</p> <p>8 BY MR SHAMBERG:</p> <p>9 Q. -- what effect would that have on 10 chlorine resistance, if any?</p> <p>11 MR. KUHLMAN: Sorry. Object to form.</p> <p>12 THE WITNESS: I have never seen 13 anything -- I've never seen anything published 14 with respect to oxidative resistance versus degree 15 of cross-linking. I can tell you in the claims 16 that I've examined I haven't seen any obvious 17 trend where there's a number of cross-linking that 18 corresponds to oxidative failures. I've seen a 19 variety of cross-linking results with the 20 occasional oxidative failures that come in.</p> <p>21 BY MR SHAMBERG:</p> <p>22 Q. We talked about dose earlier, the 23 dose that's used during the cross-linking 24 process. How does the dose affect the gel 25 content of the tubing?</p>
<p>1 I mean, there's a window that they give, and if 2 it's within that window, the product is 3 intended to perform as PEX.</p> <p>4 Q. Okay. But aside from just meeting 5 the standard, you're not aware of how the 6 degree of cross-linking affects the chlorine 7 resistance of PEX?</p> <p>8 MR. KUHLMAN: Object to form.</p> <p>9 THE WITNESS: I've never seen 10 anything published that would indicate there is an 11 effect. I mean, cross-linking is not a linear 12 response. It's not like you give this dose, you 13 get this; you give double the dose, you get double 14 the cross-link. It's the higher the degree of 15 cross-linking, the more dose has to go into it.</p> <p>16 At some point, I mean, there's a 17 limit to what you can achieve with a particular 18 type of resin. Certain resins have values that 19 they tend to max out at, and you would really have 20 to dose that product to get it up to the top, if 21 it were even possible.</p> <p>22 So, I mean, being on the high end of 23 the spec is not necessarily a good thing, and 24 there's no -- there is no published evidence that 25 being anywhere within that spec with respect to</p>	<p>1 Page 99</p> <p>1 A. Well, like I said, it's not a 2 linear response, but your dose is set based 3 on -- obviously, there's a qualification that's 4 done, but you use the minimum dose required to 5 achieve the target level of cross-linking. I 6 mean, the less dose, the less cross-linking; 7 the more dose, the more cross-linking. But, 8 like I said, doubling the dose will not 9 necessarily double the cross-linking. It's not 10 linear.</p> <p>11 Q. For the 1006 tubing specifically, 12 did NIBCO have a target level of cross-linking?</p> <p>13 A. E-BEAM has a product specification 14 for the product that we process through them, 15 and basically that specifies what the dose is 16 and what the energy is.</p> <p>17 Q. Okay. I think my question was a 18 little bit different because there's that gel 19 consent standard that we talked about.</p> <p>20 A. Correct.</p> <p>21 Q. 65 to 89 percent?</p> <p>22 A. Correct.</p> <p>23 Q. So in that range specifically, was 24 there a target number that NIBCO wanted to 25 achieve with the 1006 pipe?</p> <p>1 Page 100</p>

<p style="text-align: right;">Page 102</p> <p>1 A. For the percentage to gel?</p> <p>2 Q. Yes.</p> <p>3 A. There wasn't a written target.</p> <p>4 Generally, we wanted to be far enough above the 5 65 percent that the results, when you test 100 6 different samples in a row, there was some 7 error inherent in the test process itself. 8 There's some -- you know, just a small amount 9 of -- it's not a perfect, you know, you get the 10 same exact result he have single time. There's 11 a little bit of noise in the test data.</p> <p>12 We wanted to make sure that it was 13 high enough that, you know, none of those 14 points would fall below the 65 percent minimum. 15 So typically we saw results, you know, anywhere 16 from like 67 to 70 percent on average. I mean, 17 it's -- there's some variation. Those aren't 18 hard in stone numbers, but they meet the spec.</p> <p>19 Q. Was there a reason that NIBCO 20 wasn't trying to achieve 75 percent gel 21 content?</p> <p>22 A. Well, the main reason was what I 23 described before where it's not linear. I 24 mean, it sometimes would take a massive amount 25 of additional dose to get just those few</p>	<p style="text-align: right;">Page 104</p> <p>1 A. Okay. Yes.</p> <p>2 Q. Do you recall writing this email?</p> <p>3 A. I don't recall writing this 4 specific email.</p> <p>5 Q. In the email you're recommending 6 an increase in the dose for all PEX tubing, is 7 that correct?</p> <p>8 A. Yes.</p> <p>9 Q. And that's based on three 10 additional failing gel tests that you had 11 received?</p> <p>12 A. Yes.</p> <p>13 Q. When you say additional, were 14 there other failing gel test results that you 15 received prior to that that you recall?</p> <p>16 MR. KUHLMAN: Object to form.</p> <p>17 THE WITNESS: I can't speculate. I 18 don't know.</p> <p>19 BY MR SHAMBERG:</p> <p>20 Q. You say you make the request to 21 make the dose change for all product sizes as 22 results for one-inch and half-inch PEX have 23 been uncomfortably close to the lower limit. 24 What to you is uncomfortably close to the lower 25 limit?</p>
<p style="text-align: right;">Page 103</p> <p>1 percentage points higher, and there's a risk 2 potentially to causing an adverse affect from 3 doing that. So basically our intent was to 4 meet the standard and ensure that our product 5 met the parameters that were published for PEX. 6 We didn't have a specific target for a goal to 7 get it higher because, like I said, it's not 8 linear. We didn't want to overdose the 9 radiation either.</p> <p>10 Q. Okay. So ultimately the goal was 11 to meet the applicable standard --</p> <p>12 A. Correct.</p> <p>13 Q. -- to meet the 65 percent?</p> <p>14 (Thereupon, Plaintiffs' Exhibit 5, 15 Memo from Debbie Premus dated February 20, 2007, 16 was marked for purposes of identification.)</p> <p>17 (Thereupon, Plaintiffs' Exhibit 6, 18 email chain Bates stamped NIBCO-Cole 00036756 19 through NIBCO-Cole 00036761, was marked for 20 purposes of identification.)</p> <p>21 BY MR SHAMBERG:</p> <p>22 Q. So, Ms. Premus, I want to start 23 with this first document that I gave you that 24 has the Bates stamp NIBCO-Cole 000051857. Do 25 you have that document?</p>	<p style="text-align: right;">Page 105</p> <p>1 A. It's what I just described in our 2 previous questions. Like I said, you can get 3 100 results and the majority of them can fall, 4 you know, within the specification. You may 5 get a certain percentage of those that tend to 6 fall out the bottom. And basically what I do 7 remember about this particular situation was, 8 obviously, the lower the dose, the lower the 9 cost of processing. And it appears -- the way 10 I wrote this memo, it appears that I know when 11 we started the dose was 28 megarads. It was 12 taken down to 24, I'm presuming for cost 13 savings. And I'm saying here that I want it 14 back at 28, which is where we had historical 15 data, and I knew that when you have these 100 16 data points, there was enough of a buffer there 17 that it wouldn't potentially fall out the 18 bottom.</p> <p>19 Q. So when determining -- when NIBCO 20 is determining the dose at which the tubing 21 will be cross-linked, cost is a factor that's 22 involved, right?</p> <p>23 A. For any manufacturing process, no 24 matter what the product, that would be one of 25 the considerations, and quality.</p>

1 Q. So I want to get a better
 2 understanding of what you mean when you say
 3 uncomfortably close to the lower limit. So the
 4 lower limit is 65 percent, right?

5 A. Right.

6 Q. So at what number would you be
 7 comfortable?

8 A. I didn't specify that here. I
 9 don't recall exactly writing this memo. I
 10 don't know that one could determine a number
 11 unless you do further testing. What I was
 12 requesting in this memo was that apparently a
 13 dose lowering had been made. Based on the
 14 results that I received, I felt -- and my role
 15 wasn't to look at the cost. It was to look at
 16 the quality. I felt that we needed to
 17 immediately change back to the historical dose,
 18 you know, where I did feel comfortable at that
 19 time. Apparently that was what I was thinking
 20 when I wrote this memo.

21 Q. Okay. Even aside from this memo,
 22 just asking you now sitting here today, at what
 23 percentage of gel content would you feel
 24 comfortable?

25 A. I mean, I don't know that I could

1 give you an exact number. You know, individual
 2 data points can fall above or below, you know,
 3 a certain average. I would want those to be
 4 high enough that the majority of those data
 5 points within a certain amount of confidence
 6 are going to fall within the standard for PEX.

7 You know, I don't want to have --
 8 I don't want to test 100 samples and have five
 9 of them fall out the bottom. That would be
 10 five blocks of product that would be put on
 11 hold from my perspective. I don't look at it
 12 from a cost perspective. I look at it from a
 13 perspective of meeting the standard.

14 Q. So would you be comfortable with a
 15 result of 65.1 percent?

16 MR. KUHLMAN: Object to form.

17 THE WITNESS: 65.1 percent would be a
 18 passing result. As an individual result, that
 19 meets the standard for PEX.

20 BY MR SHAMBERG:

21 Q. Okay. So you would be comfortable
 22 with it?

23 MR. KUHLMAN: Object to form.

24 THE WITNESS: But if that were an
 25 average, I would be concerned that the next sample

1 might be 64.9 percent. But, I mean, if you have a
 2 sample that's 65 percent, that is PEX and that
 3 meets the ASTM standard as an individual sample.
 4 BY MR SHAMBERG:

5 Q. Okay. And is there a percentage
 6 at which you would be comfortable, an average
 7 percentage at which you would be comfortable?

8 A. If the percentage is 65 to
 9 89 percent, I'm comfortable because that meets
 10 the standard. You know, I don't want to see
 11 samples falling out and failing.

12 Q. Okay. So a passing sample at
 13 65 percent, you'd be okay with that?

14 A. A 65 percent is a 65 percent pass.
 15 I wouldn't want 65 to be my average, but
 16 individual data points at 65 percent pass.

17 Q. Okay. But in this email you're
 18 not stating that you're uncomfortable because
 19 the numbers are below 65 percent, right?

20 A. I'm stating in the email that I
 21 want to make an immediate adjustment from the
 22 24 back to 28 megarads because there were three
 23 samples that were not at least 65 percent. I
 24 mean, a passing sample is 65 to 89 percent. If
 25 it said fail, it had to have been below

1 65 percent.

2 Q. And the results for the one-inch
 3 and half-inch PEX were uncomfortably close to
 4 that 65 percent limit, right?

5 A. Not individual results. I'm
 6 talking about the average, because my concern
 7 would be not for those individual test results.
 8 My concern would be the next reel. Is that one
 9 also going to be 65 percent or above? I want
 10 the average to be set so that there's a little
 11 bit of noise in the testing process that's
 12 inherent to the process. It's not something
 13 that can be minimized.

14 I want it to be -- I want the
 15 average to be high enough that it allows for
 16 that little bit of noise in those samples that
 17 do measure slightly lower to fall within the
 18 requirement for PEX. I'm not sure if I'm being
 19 clear with that, but, I mean, basically my goal
 20 is not to have a failing sample.

21 Q. Right.

22 A. And it's based on probability.

23 Q. Yeah. I understand. I understand
 24 that your goal is to make sure that all the PEX
 25 that's produced meets that standard.

<p style="text-align: right;">Page 110</p> <p>1 MR. KUHLMAN: Object to form. 2 BY MR SHAMBERG: 3 Q. I'm just trying to get an 4 understanding based on the language that you 5 wrote in this email as to what number you'd be 6 comfortable with having that average at, and it 7 seems as though you're saying if the average is 8 above 65 percent, you're comfortable, is that 9 accurate? 10 MR. KUHLMAN: Object to form. 11 THE WITNESS: No, that's not 12 accurate. What I'm saying is I'm not giving a 13 comfortable level. I'm saying that when we were 14 running at 28 megarads, at that time I wasn't 15 seeing failures. So my comfort level was to go 16 back to that dose because I felt that that gave us 17 enough buffer that I wasn't seeing occasional 18 reels that did not meet the requirement. 19 I mean, at that time I probably 20 didn't have enough data to say 24, 25, 26, 27. I 21 said let's go back to 28 because I had these three 22 results. And that's as far as -- I can't give you 23 any additional information on that. That's as far 24 as I can tell at the time. 25 BY MR SHAMBERG:</p>	<p style="text-align: right;">Page 112</p> <p>1 Strictly from your point of view as the quality 2 assurance manager, would having the dose set at 3 such a level that the gel content was greater 4 than 70 percent have made you more comfortable 5 that the PEX-C tubing that NIBCO was producing 6 would meet the gel content standard in all 7 instances? 8 A. Not necessarily. 9 Q. Okay. Why not? 10 A. I mean, first of all, like I said, 11 we -- from this document here, we had it at 28 12 megarads data apparently at the time that 13 substantiated that that was sufficient. I 14 mean, like I said, it's not a linear response 15 when you cross-link. And the question would 16 be, you know, how much of a dose does it take 17 to get over 70 percent. 18 I mean, I don't have that 19 information. That's outside the scope of my 20 responsibility. That would be, you know, more 21 of an engineering project. But there could 22 potentially be reasons why that higher dose and 23 the additional radiation may or may not be a 24 good thing. That's outside of my scope of 25 responsibility or knowledge.</p>
<p style="text-align: right;">Page 111</p> <p>1 Q. And you said that typically the 2 historical levels for NIBCO were somewhere in 3 the 67 to 70 percent range? Is that what you 4 testified to? 5 A. I said that's roughly about, you 6 know, where they fall. And, you know, when I 7 see them in that level, that's not written in 8 stone. That doesn't necessarily say that it 9 has to be 28 megarads. It may be 26. It may 10 be 25. I'm just saying right here at this 24 11 megarad level, I saw three -- at this 12 particular point in time, I saw three samples 13 that made me question taking it down that low. 14 Let's take it back to where we 15 know we're getting the results that we feel 16 comfortable with. And if there's any 17 additional work that apparently Earl did at a 18 later point in time, you know, obviously, we 19 would look at more data to determine or fine 20 tune exactly what that point is. I mean, I 21 can't, based on this -- it was outside of my 22 knowledge at the time and, you know, I didn't 23 do the study to optimize that dose. 24 Q. Okay. I understand that. Let me 25 ask a little bit of a different question.</p>	<p style="text-align: right;">Page 113</p> <p>1 Q. Okay. Did you ever tell anyone at 2 NIBCO that you'd like to see that gel content 3 number be higher? 4 A. I can't recall. I might have said 5 that, but, like I said, that's outside of my 6 scope. And it would not have had data to 7 substantiate whether or not that was 8 necessarily a good thing. You know, my 9 interest is meeting the spec, and if I feel 10 something has a risk of not meeting the spec, 11 that's when I'm going to, you know, voice an 12 opinion that we need to make a change. 13 Q. I think we've talked about before 14 about how some of NIBCO had a relationship with 15 JANA Labs, correct? Did JANA Labs perform 16 testing of the PEX-C tubing for NIBCO? 17 A. Yes. 18 Q. What kinds of testing did JANA 19 perform? 20 A. JANA, for a period of time, did 21 our gel testing until we got the process 22 inhouse. That was only within the last couple 23 of years. So we did send out routine 24 production samples for gel, and they also 25 performed certification, annual certification</p>

<p style="text-align: right;">Page 114</p> <p>1 testing for us. 2 Q. Okay. Now that the gel testing is 3 inhouse, where does that occur? 4 A. It occurs in Lebanon now. 5 Q. And is all PEX-C tubing still 6 manufactured in Lebanon? 7 A. Yes. 8 Q. To your knowledge, has JANA ever 9 informed NIBCO that any of its failed 10 field-returned pipe was insufficiently 11 cross-linked? 12 MR. KUHLMAN: Object to form. 13 THE WITNESS: There -- it's been a 14 long time. I don't recall many of them. I think 15 there were one or two situations where there might 16 have been a sample that came back that was listed 17 as below the spec for gel at 65 to 89 percent, but 18 it wasn't something that -- you know, of the 19 samples that came back, like I said, there are any 20 number of reasons that there could be a potential 21 leak in the field. It wasn't anything that there 22 was a correlation with gel. I do remember a few 23 samples. I can't remember specifically what they 24 were at this time. 25 BY MR SHAMBERG:</p>	<p style="text-align: right;">Page 116</p> <p>1 questions about the print stream on the tubing. 2 What's the print stream on the PEX tubing? 3 A. Basically, it has our trade name. 4 It has the regulatory listing, verbiage, an NSF 5 mark, if it were NSF as the listing agency, or 6 IAPMO mark if it's an IAPMO listing agency. 7 The pressure rating, the lot number, the date 8 that it was cut, coiled, and marked, and the 9 footage. 10 BY MR SHAMBERG: 11 Q. When is the print stream applied 12 to the tubing? 13 A. The print stream is applied to the 14 tubing at the time it's cut and coiled. That 15 would be after cross-linking -- after extrusion 16 and after cross-linking. 17 Q. So earlier when you described the 18 cut, coil, and mark process, it's the marking 19 part of that? 20 A. Yes. It's the last stage in the 21 production process. 22 Q. How is it actually applied to the 23 tubing? 24 A. It's sprayed onto the tubing. 25 Basically, it's passed on rollers and guides,</p>
<p style="text-align: right;">Page 115</p> <p>1 Q. How would PEX-C tubing that did 2 not meet the 65 percent gel content requirement 3 have wound up in the field? 4 A. Because not every single reel is 5 tested. It's an expensive test. The standard 6 requires one test per week for production. We 7 actually test it at double that frequency. 8 Q. Twice a week? 9 A. Two samples per week. 10 Q. So it's just something that the 11 testing would have missed? 12 A. Yeah. I mean, you can't test 13 every single inch of pipe that you manufacture. 14 You test at a frequency that you believe is 15 sufficient, and that's -- like I said, the 16 standard calls for one gel test per week. We 17 tested two. 18 Q. Do you believe that testing twice 19 a week for gel content is sufficient to ensure 20 that the tubing that NIBCO is selling is 21 adequately cross-linked? 22 A. It appeared to be, yes, basically 23 because we trended that data over a long period 24 of time. 25 Q. I just want to ask you a couple</p>	<p style="text-align: right;">Page 117</p> <p>1 and it goes -- it passes in front of a print 2 head which spray marks the print stream every 3 five feet. 4 Q. Okay. Have you ever seen a 5 situation where that print stream curves around 6 the pipe? 7 A. Occasionally that can happen. 8 It's rare. 9 Q. Okay. Do you know why that 10 happens when it does? 11 A. It might be because somebody is 12 coiling by hand. It might be that as the 13 product is spooling off of the reel, it just -- 14 it could be that, you know, the product just 15 spools off in that manner or somebody could 16 have bumped the print head during the 17 production process. You know, I can't 18 speculate. I can't tell you exactly what 19 happened. 20 There are a number of ways that 21 you might see an irregularity on print stream. 22 Sometimes if, you know, they -- if they're 23 cutting and coiling by hand, which a lot of our 24 machines are manual, they actually stop, cut 25 the tubing by hand at the correct footage</p>

<p>Page 118</p> <p>1 marker, they take the coil that's on the 2 apparatus, they pull it off, they put it into a 3 container. You know, they may be jerking the 4 tube at that time. You know, it could cause an 5 irregularity at a particular point in print.</p> <p>6 Q. Okay. Just one more kind of 7 general question on this topic. Earlier we 8 talked about the different what I've been 9 referring to as phases of manufacturing, 10 extrusion, cross-link, and the cutting, 11 coiling, and marking, and you described the 12 quality assurance steps that are implemented 13 throughout that process. Did those quality 14 assurance steps differ between CPI and NIBCO?</p> <p>15 A. Not really. I don't recall 16 anything other than just gradual improvements 17 in documentation and things over time. 18 Naturally what occurs when you're looking at a 19 decade worth of testing, I mean, really, there 20 was kind of a seamless transition as far as we 21 were concerned in the lab. I don't recall 22 anything at this time that changed markedly.</p> <p>23 Q. So generally they were the same?</p> <p>24 A. Yes.</p> <p>25 Q. And I think you also mentioned at</p>	<p>Page 120</p> <p>1 possible and they found a result that was 2 suspect or out, that would be submitted to 3 quality and my department would go out and 4 examine the product. If we found it to be out 5 of spec, it would be quarantined, put on hold, 6 and scrapped.</p> <p>7 Q. Okay. And that process was 8 generally the same at both CPI and NIBCO?</p> <p>9 A. Yes.</p> <p>10 MR SHAMBERG: I'm going to move into 11 kind of a different area of questioning. I think 12 this is a good time to do lunch.</p> <p>13 (Lunch break.)</p> <p>14 BY MR. SHAMBERG:</p> <p>15 Q. Okay. Ms. Premus, we're back now 16 after taking a lunch break. You understand 17 that you're still under oath, right?</p> <p>18 A. Yes.</p> <p>19 Q. I want to ask you a little bit 20 about the purchase of CPI by NIBCO in 2006. 21 When that purchase occurred, how did your 22 day-to-day responsibilities change, if at all?</p> <p>23 A. Actually, I don't recall them 24 changing substantially at all. The only 25 difference would be that I was no longer --</p>
<p>Page 119</p> <p>1 least for NIBCO that there were what you called 2 production staff checks periodically throughout 3 the process?</p> <p>4 A. Yes.</p> <p>5 Q. Was that also the case at CPI?</p> <p>6 A. Yes.</p> <p>7 Q. If someone in the production staff 8 identifies a potential issue with the tubing as 9 it's being manufactured, what happens?</p> <p>10 A. It would depend on where it is and 11 it would depend on what it is. Like, for 12 example, if it were at the point of extrusion, 13 they may take a measurement and it may still be 14 in spec but it may be drifting a little bit 15 toward the top of the spec. They would adjust 16 their machine so that they were back at their 17 target. There's the ASTM spec for dimensions.</p> <p>18 We had internal targets that were 19 tighter than the ASTM specs just to kind of 20 control and, you know, help standardize our 21 process. And so they would take those 22 measurements as they were making it and adjust 23 their machines accordingly.</p> <p>24 If it was detected later in the 25 process where, you know, no adjustment was</p>	<p>Page 121</p> <p>1 well, no, that wasn't -- that was prior to 2 us -- I was thinking -- I was confusing it for 3 a moment with going on to the committee payroll 4 when I was originally with E-BEAM, but I was 5 already on the CPI payroll when the acquisition 6 took place. Really nothing changed --</p> <p>7 Q. Okay. So --</p> <p>8 A. -- initially.</p> <p>9 Q. I didn't mean to cut you off. 10 Essentially, it was kind of -- your paychecks 11 said NIBCO instead of CPI, but other than that, 12 you were basically doing the same job 13 functions?</p> <p>14 A. To my recollection.</p> <p>15 Q. The manufacturing facility was 16 still the same in Lebanon, right?</p> <p>17 A. Yes.</p> <p>18 Q. Were other CPI employees retained 19 by NIBCO?</p> <p>20 A. Yes.</p> <p>21 Q. Do you know about how many were 22 retained?</p> <p>23 A. I don't have an exact number.</p> <p>24 Q. Okay. How many roughly employees 25 did CPI have at the time of the acquisition?</p>

<p style="text-align: right;">Page 122</p> <p>1 A. I don't remember. I mean, 2 probably more than 30, less than 60. 3 Q. Okay. And do you have a 4 recollection as to maybe what percentage of the 5 employees stayed on with NIBCO? 6 A. I don't. 7 Q. After the transition from CPI to 8 NIBCO, was NIBCO continuing to use the same 9 equipment to manufacture the PEX-C tubing? 10 A. To the best of my recollection. 11 Q. Okay. And yourself and at least 12 some CPI employees stayed on now as NIBCO 13 employees? 14 A. Yes. 15 Q. Tom Coe was one of those 16 employees, right? 17 A. Yes. 18 Q. Are there any others you can 19 remember? 20 A. I would say probably most of the 21 people stayed on. There was Larry Smallwood 22 for some amount of time, Bill Robertson, who 23 was in extrusion, for some amount of time, 24 Tracey Cobey, and then hourly employees. 25 Q. So, in general, there was a pretty</p>	<p style="text-align: right;">Page 124</p> <p>1 corporate headquarters in Elkhart, Indiana, 2 right? 3 A. Yes. 4 Q. Was that the DARE Lab? 5 A. Yes. 6 Q. Do you know what the DARE Lab -- 7 well, first of all, do you know what DARE 8 stands for? 9 A. I don't know what the acronym 10 stands for, but it's the lab that -- it's the 11 corporate laboratory that handles a lot of the 12 returns and product testing for NIBCO. 13 Q. Do you know why field-returned 14 analyses were moved from Lebanon to Elkhart in 15 around 2012 or 2013? 16 A. Yeah. There had been periodic 17 discussion. I would actually -- we were -- 18 with the acquisition, you know, I obviously -- 19 at CPI I was performing the returns for CPI as 20 an organization. That was kind of an 21 abnormality in NIBCO. Most of the returns for 22 most of our sites are evaluated at DARE, so it 23 was basically just to put us in line with the 24 rest of the facilities where they were 25 performing our evaluations as well.</p>
<p style="text-align: right;">Page 123</p> <p>1 good continuity of the business operation -- 2 A. Yes. 3 Q. -- after the purchase? 4 A. Yes. 5 Q. Okay. After the purchase in 2006 6 when you became a NIBCO employee, where were 7 field returns of PEX tubing being analyzed? 8 A. For a period of time, in Lebanon 9 by myself. 10 Q. You had sole responsibility during 11 a certain period of time for those field 12 returns? 13 A. Not sole responsibility, but I 14 performed the analysis of the returns that were 15 coming back. 16 Q. During what period of time did you 17 purchase those analyses? 18 A. Up until about 2012 or 2013. I 19 don't remember when the exact time was that 20 that ended up getting shifted up to corporate. 21 Q. Okay. Shifted up to corporate in 22 Elkhart? 23 A. Yes. 24 Q. Okay. So starting in 2012 or 25 2013, field returns were being analyzed at</p>	<p style="text-align: right;">Page 125</p> <p>1 Q. So to centralize everything at 2 corporate headquarters? 3 A. Correct. I mean, that was what I 4 understood the transition to be. 5 Q. Okay. Aside from the location of 6 where the analyses were occurring, were there 7 any changes to the process for analyzing field 8 returns? 9 A. I don't know because I wasn't 10 involved in their process up there. 11 Q. Since 2012 or 2013 when the DARE 12 Lab took over those analyses, have you 13 performed any analyses of field-returned PEX 14 pipe? 15 A. I believe there were one or two, 16 and they were ones that were accidentally sent 17 to our location instead of the DARE Lab; and 18 while they were in my possession, they had me 19 go ahead and do the evaluation. 20 Q. Okay. But aside from those maybe 21 one or two instances, those analyses have 22 occurred exclusively at the DARE Lab since -- 23 A. Yes. 24 Q. -- that time? 25 A. Yes.</p>

1 Q. 2012 or 2013?
 2 A. The responsibility was shifted.
 3 Q. And you don't know -- do you have
 4 any knowledge at all about how those analyses
 5 are conducted at the DARE Lab?
 6 A. Unfortunately, I don't.
 7 Q. Who's the most knowledgeable
 8 person at NIBCO regarding the failure analysis
 9 of field-returned PEX-C tubing?
 10 MR. KUHLMAN: Object to form.
 11 THE WITNESS: I don't know that I
 12 could specify any one individual. I mean, there
 13 have been, you know, obviously, several of us
 14 involved in looking at the returns. There also
 15 have been other individuals that have gone out to
 16 locations.
 17 BY MR. SHAMBERG:
 18 Q. Well, so who are the individuals
 19 that you're aware of who have conducted these
 20 analyses for NIBCO?
 21 A. Well, obviously, myself and anyone
 22 designated by the DARE Lab management to
 23 actually process the claims. And I don't want
 24 to speculate on who -- I don't know who all
 25 would have been involved in that up there.

1 Q. Do you know if Earl Sexton is
 2 involved in those analyses?
 3 A. I know he's been involved in some
 4 of them. I don't know if he's been involved in
 5 all of them.
 6 Q. Do you have -- are you aware,
 7 sitting here, of anyone other than yourself and
 8 Earl Sexton who has performed these
 9 field-returned analyses for NIBCO regarding PEX
 10 tubing?
 11 A. I believe there's one other
 12 individual that I've not seen, you know,
 13 physically his reports.
 14 Q. Who's that individual?
 15 A. I believe Tim O'Brien.
 16 Q. Tim O'Brien. Is he at the DARE
 17 Lab?
 18 A. Yes.
 19 Q. Do you know what his job title is?
 20 A. I don't know his title.
 21 Q. Who is -- who runs the DARE Lab?
 22 A. The manager would be Roger Hawn.
 23 Q. Roger Hawn. Okay. How long has
 24 he been in that position?
 25 A. I don't know the number of years.

1 Q. Do you know who his predecessor
 2 was?
 3 A. I don't.
 4 Q. So I guess it's fair to say that
 5 since those analyses transitioned up to the
 6 DARE Lab, you're sort of out of the loop on
 7 what specifically is going on?
 8 A. Yes.
 9 Q. As the quality assurance manager
 10 for PEX tubing, is it important for you to be
 11 aware of the results of analyses performed on
 12 field-returned PEX tubing?
 13 A. If they're determined to be
 14 manufacturing errors, yes. And we are notified
 15 if there is a manufacturing issue that's
 16 identified.
 17 Q. Okay. Is that the only instance
 18 in which you would be notified about the
 19 outcome of the analysis?
 20 A. To my best knowledge, yes.
 21 Q. Has that occurred? Have you been
 22 informed that the conclusion of an analysis of
 23 field-returned PEX tubing was that it suffered
 24 from a manufacturing defect?
 25 MR. SHAMBERG: Object to form.

1 THE WITNESS: Occasionally, yes, that
 2 has happened.
 3 BY MR. SHAMBERG:
 4 Q. Okay. Can you just describe those
 5 instances for me?
 6 A. I can't recall a specific
 7 instance, but there might have been a
 8 situation -- well, I remember one where there
 9 was a low wall thickness where we went out and
 10 we basically found the product or looked for
 11 the product to see if we had any additional in
 12 stock to put it on hold and then test. I don't
 13 recall specifically an outcome. It wasn't
 14 recent.
 15 Q. But it was since the DARE Lab took
 16 over the analyses?
 17 A. Yes. Yes.
 18 Q. Do you know what training the
 19 individuals at the DARE Lab who conduct these
 20 failure analyses received?
 21 A. I don't know.
 22 Q. So I understand that you've
 23 testified that the transition for this analysis
 24 to the DARE Lab was part of a more general
 25 centralization of these analyses across product

<p>1 lines, is that fair?</p> <p>2 A. Yes.</p> <p>3 Q. So setting that aside and strictly</p> <p>4 from your point of view as quality assurance</p> <p>5 manager, do you believe that conducting the</p> <p>6 failure analyses at the DARE Lab rather than at</p> <p>7 the manufacturing facility itself is a better</p> <p>8 option for NIBCO?</p> <p>9 A. I don't necessarily consider it a</p> <p>10 better option. It just -- like I said, it</p> <p>11 standardized the protocol for analyzing returns</p> <p>12 because it put the return evaluation in</p> <p>13 proximity with the department that would honor</p> <p>14 the warranty claims. You know, we never did</p> <p>15 that from the Lebanon site.</p> <p>16 Q. Do you think it would make sense</p> <p>17 for the facility that manufactured the product</p> <p>18 at issue to be responsible for determining</p> <p>19 whether the product suffered from a</p> <p>20 manufacturing defect?</p> <p>21 A. Not necessarily. I mean, when I</p> <p>22 was analyzing the claims down in Lebanon, if</p> <p>23 there were some additional engineering-related</p> <p>24 questions, you know, I would work with Earl</p> <p>25 Sexton. Earl Sexton likewise worked with the</p>	<p>1 manufactured, like the PEX tubing, then it</p> <p>2 would be examined at NIBCO Lebanon. During the</p> <p>3 time that I was in charge of that process, it</p> <p>4 depended on what the claim was. Sometimes a</p> <p>5 claim would come in for out of round or OD,</p> <p>6 and, of course, we would check everything that</p> <p>7 comes in to make sure that it meets the</p> <p>8 dimensional requirements and such.</p> <p>9 And if we looked at it and said,</p> <p>10 yes, that's a thin wall and we've confirmed it,</p> <p>11 then at that point the results would be entered</p> <p>12 into our system as such, and no additional</p> <p>13 testing would be required. It depends on, like</p> <p>14 I said, what the claim is. If it's a different</p> <p>15 type of issue that's alleged, there may be</p> <p>16 additional testing that's involved. It was</p> <p>17 based on product knowledge.</p> <p>18 Q. Okay. Are you familiar with the</p> <p>19 term product return authorization?</p> <p>20 A. Yes.</p> <p>21 Q. What is a product return</p> <p>22 authorization?</p> <p>23 A. Basically when a customer calls in</p> <p>24 with a problem, our technical services</p> <p>25 department would take the claim, record what</p>
<p>Page 131</p> <p>1 DARE Lab. So I don't necessarily see it as</p> <p>2 advantageous as long as the person, you know,</p> <p>3 has the ability to perform the analysis. You</p> <p>4 know, my understanding of the transition was</p> <p>5 that it was just to standardize the process</p> <p>6 across NIBCO.</p> <p>7 Q. Okay. So then I want to focus on</p> <p>8 the time period, let's say, strictly with</p> <p>9 respect to NIBCO from 2006 until about 2012 or</p> <p>10 2013 when the DARE Lab took over these failure</p> <p>11 analyses. Just walk me through the process</p> <p>12 that you would go through when you received a</p> <p>13 field-returned piece of PEX tubing for</p> <p>14 analysis.</p> <p>15 A. I mean, any number of claims of</p> <p>16 any -- you know, could come in for various</p> <p>17 reasons. I mean, they weren't all the same.</p> <p>18 First, I would look to see what the product</p> <p>19 was. If it was a fitting, it would be</p> <p>20 transferred to the DARE Lab where they have --</p> <p>21 when I say metallurgics, I mean beyond just an</p> <p>22 XRF materials scan. They would be forwarded to</p> <p>23 DARE, which has more capabilities than we do in</p> <p>24 that respect.</p> <p>25 If they were product that we</p>	<p>Page 133</p> <p>1 the customer -- record the information from the</p> <p>2 customer, and then issue them a form which had</p> <p>3 my address on it in the Lebanon facility, and</p> <p>4 they would submit the product along with that</p> <p>5 form to me for evaluation.</p> <p>6 Q. How does NIBCO -- prior to the</p> <p>7 beginning of your analysis, how would NIBCO go</p> <p>8 about determining what the particular issue</p> <p>9 with the tubing was?</p> <p>10 MR. KUHLMAN: Object to form.</p> <p>11 THE WITNESS: Prior to my analysis?</p> <p>12 BY MR. SHAMBERG:</p> <p>13 Q. Yeah.</p> <p>14 A. I don't know.</p> <p>15 Q. Maybe that was -- I can try to</p> <p>16 rephrase that. So you had said when I asked</p> <p>17 you what the process is like when you conduct</p> <p>18 one of these analyses, you said it depends on</p> <p>19 what the particular issue is, whether it's an</p> <p>20 out of diameter issue versus, you know, another</p> <p>21 problem. That might affect how you go about</p> <p>22 your analysis?</p> <p>23 A. By that point, the product already</p> <p>24 has a return authorization and it's already in</p> <p>25 my possession. A customer might call the</p>

1 technical service line and say, you know, we
 2 have an enlarged OD or they might say that we
 3 have a product leak, and obviously they can't
 4 tell over the phone without looking at the
 5 product or having the product knowledge what it
 6 is.

7 They would issue a PRA, which
 8 would authorize the customer to return that
 9 allegedly defective product to me accompanied
 10 with the PRA which would give me the number
 11 that that claim was filed under in SAP. And
 12 then I would conduct my evaluation. I mean, up
 13 until that point, you know, it's unknown what
 14 the cause or nature of the failure is other
 15 than what the customer claims.

16 Q. Okay. Right. And that's kind of
 17 what I was getting at. So if the customer is
 18 an end user, you know, an individual who has
 19 the PEX tubing installed in his or her home --

20 A. Right.

21 Q. -- and that person contacted NIBCO
 22 and said, you know, my pipe leaked, then it
 23 wouldn't be until you conducted your analysis
 24 that NIBCO is able to determine what the
 25 problem was with the pipe, is that true?

1 A. Well, there may be steps
 2 subsequent to my analysis, too, that are
 3 involved in determining what the cause is.

4 Q. Okay. So if a customer -- I
 5 understand a customer could call in and say,
 6 you know, it's an enlarged OD issue. But if a
 7 customer calls in and just says there's water
 8 coming out of my pipe, I don't know what's
 9 going on with it, here it is, and then it comes
 10 to you, what steps do you take after you
 11 receive the PRA in that pipe?

12 A. What I would do first is I'd try
 13 to visually locate the point at which the water
 14 was leaking, and I would preserve that part of
 15 the evidence to make sure that it's not damaged
 16 or altered in the course of testing. I want to
 17 make sure that that's preserved as evidence of
 18 the claim.

19 I would write down my visual
 20 observations. I would test the wall thickness,
 21 out of diameter dimensions and such just to
 22 make sure the pipe left the facility -- at
 23 least it still tested within the spec for ASTM
 24 wall thickness to make sure that wasn't a
 25 potential contributing factor. I would note

1 anything that I saw pertinent to, you know,
 2 whatever the situation was with that on my
 3 evaluation form.

4 Q. And how would your findings be
 5 recorded?

6 A. I would record strictly what I
 7 measured or saw. It would be uploaded into
 8 SAP. I would basically open our SAP platform,
 9 and there was a field in there where I'd put
 10 the date, I'd put my initials, and I would
 11 indicate that the pipe did or did not meet ASTM
 12 dimensional specs for walls and out of
 13 diameter.

14 I would note the type of failure
 15 point or, you know, leak point that I saw. Is
 16 it perpendicular to the length of tubing? Is
 17 it in line with the length of tubing? Is it on
 18 the outside of the bend? Is it a brittle
 19 failure, which is an oxidative failure. Is it
 20 ductile, which is more of a pliable different
 21 mode of failure of tubing. Doesn't necessarily
 22 point to the root cause type of failure that
 23 you could see. There could be any number of
 24 environmental or, you know, contributing
 25 factors that, you know, may result in that type

1 of a failure. That's typically a premature
 2 aging mode of failure for PEX pipe.

3 Q. Okay. How would you then go about
 4 determining -- so let's use a specific example.
 5 For an oxidative-type failure, what steps would
 6 you take to determine what caused the failure?

7 A. You know, I could determine in my
 8 lab that it was an oxidative failure. I would
 9 require additional assistance from a
 10 representative that might, you know, actually
 11 go out to the site and, you know, examine the
 12 installation. That part I did not do.

13 Q. Okay. And I think that's what you
 14 said before. So have you ever done that in any
 15 instance, go out into the field to inspect the
 16 installation?

17 A. I went on one trip, but that was
 18 to a plumber. I did not actually see a fail
 19 claim in an installation situation. All I saw
 20 was a model home that had PEX plumbed to a
 21 water heater, but it was not a home that there
 22 was a failure in.

23 Q. Do you know -- with respect to the
 24 field-returned analyses that you personally
 25 performed for PEX tubing, are you aware of any

<p>1 instance in which someone from NIBCO went out 2 and did a field inspection of the location 3 where the failure occurred?</p> <p>4 A. I've known that that's occurred 5 for at least several instances. I don't 6 know -- I don't necessarily know what the 7 findings are or I can't recall any specific 8 information about them. I do know that that 9 has happened with claims that have come in.</p> <p>10 Q. So it has occurred, but the 11 results or whatever the findings were from the 12 inspection weren't then shared with you?</p> <p>13 A. I may have seen some of them. I 14 can't specifically remember. But it wasn't 15 something that for every claim it's part of the 16 protocol that -- you know, I did not see the 17 results for every claim as part of the 18 protocol. Maybe occasionally I would see them 19 if there were questions that they had about my 20 evaluation in relation to what they saw.</p> <p>21 Q. Okay. So then who at NIBCO is 22 responsible for making the determination after 23 that field inspection occurs as to whether the 24 failure was a result of a manufacturing or 25 design defect versus an issue with installation</p>	<p>1 A. Yes. 2 (Thereupon, Plaintiffs' Exhibit 7, 3 email chain Bates stamped NIBCO-Cole 00094921 4 through 00094928, was marked for purposes of 5 identification.) 6 BY MR. SHAMBERG: 7 Q. And, Ms. Premus, I'll invite you 8 to look through this document in its entirety. 9 You certainly should. But my questions are 10 going to focus on just this first page. 11 A. Okay. 12 Q. But please feel free to review the 13 entire document. 14 A. At first I think you scared us 15 with the pile that you have over there. 16 Q. It's getting a lot smaller. 17 A. The bond is thick on this. I 18 think you have twice as much paper. 19 Q. Staples uses quality paper 20 apparently. 21 A. That they do. Okay. 22 Q. So, Ms. Premus, I've handed you a 23 document with the Bates number NIBCO-Cole 24 00094921. The first question I have is have 25 you ever seen this document before?</p>
<p>Page 139</p> <p>1 or application?</p> <p>2 A. Our technical services department 3 would issue the letter to the customer. I was 4 not part of -- I was not involved in that part 5 of the process.</p> <p>6 Q. That's Ken McCoy's department?</p> <p>7 A. Yes.</p> <p>8 Q. Have you worked with Ken McCoy in 9 the past dealing with these analyses?</p> <p>10 A. Yes. I mean, not on an 11 individual -- not on an every evaluation basis, 12 but occasionally if there were questions, he 13 would call me.</p> <p>14 Q. Do you know whether Mr. McCoy has 15 a background in failure analysis of PEX tubing?</p> <p>16 A. I don't know specifically what his 17 background is.</p> <p>18 Q. Do you know whether anyone in the 19 technical services department has a background 20 in failure analyses of PEX tubing?</p> <p>21 A. I don't know.</p> <p>22 Q. But technical services is 23 ultimately the one who's making the 24 determination as to whether to fulfill a 25 warranty claim or not?</p>	<p>Page 141</p> <p>1 A. Not to my recollection. I don't 2 recall. I just looked and I don't see myself 3 on the distribution either.</p> <p>4 Q. Okay. I want to ask a question 5 relating to the email on that first page of the 6 document from Earl Sexton to Ken McCoy and 7 Jarrod Brigham on Wednesday, June 29, at 11:24 8 a.m. Do you see that email?</p> <p>9 A. Yes.</p> <p>10 Q. And does this appear to you to be 11 Earl Sexton's report regarding one of these 12 failure analyses that we were just discussing?</p> <p>13 A. Based on this email, yes.</p> <p>14 Q. So I want to ask you about one 15 particular phrase he uses a couple of times. 16 And if you look at, I guess, what would be the 17 third paragraph of his email, the one that says 18 microscopic examination shows the inner wall to 19 be discolored, white discoloration, and micro 20 cracking. Both observations suggest exposure 21 to aggressive water. Do you see what language?</p> <p>22 A. Yes.</p> <p>23 Q. Okay. And then if you look at the 24 bottom, the final paragraph of his email, the 25 second sentence there says he observed</p>

<p>1 discoloration, and micro cracking of the inner 2 wall surface suggests attack by aggressive 3 water. Do you see that as well? 4 A. Yes. 5 Q. Have you heard that term used 6 before, aggressive water? 7 A. Yes. 8 Q. What does aggressive water mean to 9 you? 10 A. Well, it could mean any number of 11 things. It would be a water chemistry that 12 would be conducive to potential oxidative 13 attack. 14 Q. Okay. What chemical factors would 15 make water aggressive? 16 A. There are several. It could be 17 pH. It could be oxidative reductive potential 18 or ORP. It could be chlorine. It could be 19 chlorine dioxide. It depends on what sanitizer 20 or chlorination form that a municipal source 21 distributes. There could be other factors as 22 well above beyond what I've stated. 23 Q. Can temperature make water 24 aggressive? 25 A. It can make it -- obviously, the </p>	<p>1 chlorine that can occur in municipal water. 2 Usually the free chlorine is about one percent 3 for most municipalities, but it can range 4 from -- don't quote me exactly on this, but the 5 spec is wider than that for total chlorine, and 6 so some municipalities may have higher levels 7 or they may use chlorine dioxide in place of 8 chlorine, which is more aggressive. 9 Q. At what temperature does water 10 become aggressive? 11 A. I don't know specifically. Just 12 that the warmer the water, the more, you know, 13 aggressive it becomes. 14 Q. Is there any type of industry 15 standard that defines what aggressive water is? 16 A. Not that I've ever seen. 17 Q. Does the product at issue itself 18 affect whether water would be deemed 19 aggressive? 20 A. Can you repeat that again? I'm 21 not sure. 22 Q. Can water be aggressive with 23 respect to, for example, one manufacturer's 24 PEX-C tubing and not aggressive with respect to 25 a different manufacturer's PEX-C tubing? The </p>
<p>1 higher the temperature, the potentially, you 2 know, faster a reaction could potentially 3 occur. So, yes, that is also a factor, among 4 other things. 5 Q. Okay. And you mentioned something 6 called ORP. Did you say that's oxidative 7 reduction potential? 8 A. Yes. 9 Q. Can you explain what that is? 10 A. Basically, it would be like when 11 there's an oxidative failure, it would be like 12 a -- basically like slow degradation over time. 13 Free radicals that would, you know, interact 14 with the surface of tubing, basically producing 15 an oxidative-type effect. 16 Q. Okay. So you said chlorine level 17 could be one of the factors that would play 18 into -- 19 A. Right. 20 Q. -- making water aggressive? 21 A. Residual chlorine. 22 Q. At what level of chlorine does 23 water become aggressive? 24 A. I've never heard of a particular 25 level. There is a spec for the percentage of </p>	<p>1 same one? 2 A. I don't have enough information to 3 answer that question. 4 Q. Okay. For PEX-C tubing, we've 5 discussed a little bit in a general sense, but 6 there are certain four-number designation codes 7 that are used for that tubing, is that true? 8 A. Yes. 9 Q. And so, for example, the 1006 was 10 a formulation that NIBCO produced, correct? 11 A. Yes. 12 Q. What does the one indicate? 13 A. I believe the first digit is for 14 chlorine. There's a listing -- a designation 15 for like intermittent hot water use versus like 16 continuous recirculation. And the product is 17 considered to meet standard for that 18 application if it receives the designation, the 19 letter -- or the number designation 20 corresponding to whether it's intermittent or 21 continuous. 22 Q. Okay. What are the other possible 23 number designations for that chlorine aspect? 24 A. Well, there would be like three or 25 five. </p>

1 Q. One, three, or five?
 2 A. One, three, or five, yes.
 3 Q. So if you have water where the
 4 chemical makeup is the same, could that water
 5 potentially be aggressive with respect to a
 6 one-rated pipe with respect to chlorine
 7 resistance and not aggressive with respect to a
 8 5-designated pipe for chlorine resistance?

9 MR. KUHLMAN: Object to form.

10 THE WITNESS: If you were using the
 11 product in accordance with the rating, you know,
 12 if you have a noncontinuous recirculation product
 13 and you use it in a noncontinuous application,
 14 that product is supposed to perform to the
 15 extrapolated lifetime as any other product. I
 16 mean, I don't know that there's a difference
 17 between a one or a three or a five. I mean, if
 18 you're using it for the correct application that
 19 it's listed for, the product is supposed to last
 20 for the length of time that it's extrapolated and
 21 at least warrantied.

22 BY MR. SHAMBERG:

23 Q. Okay. But I'm trying to kind of
 24 pin down a little bit what we mean when we talk
 25 about what makes water aggressive. So I

1 Earl Sexton came to the conclusion that the
 2 failure in this particular instance was due to
 3 aggressive water?

4 MR. KUHLMAN: Object to form.

5 THE WITNESS: I didn't perform the
 6 evaluation, so I don't know what criteria he used
 7 to come to that conclusion.

8 BY MR. SHAMBERG:

9 Q. Have you personally ever performed
 10 any field-returned analyses of PEX tubing where
 11 you determined that the failure was due to
 12 aggressive water?

13 A. I can't -- I can't answer either
 14 yes or no because I don't specifically remember
 15 individual situations where that might have
 16 occurred.

17 Q. Do you remember in a general sense
 18 having ever reached that conclusion in your
 19 analyses?

20 A. I can't remember.

21 Q. Would you be able to reach that
 22 conclusion after performing your analysis?

23 A. I mean, it just depends on the
 24 individual situation. I mean, if I saw
 25 discoloration in the interior of the tube, it

1 understand the products are -- you know, will
 2 perform according to the standard that they are
 3 certified as meeting. What I wonder is whether
 4 the particular product at issue, so, for
 5 example, a one-rated pipe versus a five-rated
 6 pipe, would impact whether particular water
 7 would be considered aggressive in that
 8 application?

9 A. I have no information that would
 10 suggest that. I simply can't give an answer.

11 Q. So is -- so aggressive is somewhat
 12 of an amorphous term then?

13 A. I mean, there are different water
 14 chemistries in different regions, some
 15 potentially, you know, more extreme than
 16 others. That can be a contributing factor to
 17 oxidative-type failures. But I mean, there's
 18 no -- I can't give you a specific number where
 19 that occurs. It just is a potential
 20 contributing factor. That's the limit of what
 21 I could state for that.

22 Q. So based on your -- and I
 23 understand you can't get into attack, but based
 24 on your experience performing field-returned
 25 analyses for PEX tubing, how do you believe

1 would be reasonable to speculate that, you
 2 know, something in contact with that interior
 3 of the tube could have been a factor in the
 4 oxidative failure. You would have to look at
 5 the tube to see how the crack propagated, you
 6 know. But without having looked at this
 7 particular example, you know, I couldn't
 8 comment further.

9 Q. I believe you testified earlier --
 10 and, again, if I'm misstating, please tell
 11 me -- you said that you wouldn't be able to
 12 determine what the cause of a particular
 13 failure was without having some information
 14 about the application it was being used in,
 15 correct?

16 MR. KUHLMAN: Object to form.

17 THE WITNESS: I mean, you would need
 18 to have information. Obviously, like I testified
 19 earlier, too, there are some situations that come
 20 through in the lab where you may have a general
 21 idea or clue as to what may have been a
 22 contributing factor such as the location of the
 23 split, what kind of split it was, whether it was
 24 on the outside of the bend.

25 In this case here he describes

1 discoloration on an interior surface. But, like I
 2 said, I can't comment on this specific case. But,
 3 you know, if I saw a sample that came in where I
 4 saw visual evidence of an oxidative attack on a
 5 surface that came in contact with water, that
 6 would be one valid speculation as to the cause.
 7 BY MR. SHAMBERG:

8 Q. Okay. In your reading of this
 9 email, do you believe that Earl is speculating
 10 as to the cause or drawing a conclusion as to
 11 the causes?

12 A. I don't even want to take a guess
 13 at it because I don't know. All I have is an
 14 email in front of me. I can't testify as to
 15 what his frame of thought was at the time he
 16 wrote it.

17 Q. Okay. Then let me ask that a
 18 different way. Setting aside any conclusions
 19 that Earl Sexton made here, based on the
 20 information contained in this email, would you
 21 be able to conclude what the cause of the
 22 failure was?

23 A. I won't even speculate based on an
 24 email for a sample that I don't know that I've
 25 seen.

1 Q. Okay. But in your experience,
 2 your own personal experience analyzing these
 3 field-returned failures, setting aside
 4 speculation, in order to make a final
 5 determination as to the root cause of the
 6 failure, you would need some information about
 7 the application in which it's being used,
 8 correct?

9 MR. KUHLMAN: Object to form.

10 THE WITNESS: It depends on what
 11 visual observations I made with the sample. I
 12 mean, it depends on -- it's made on a case-by-case
 13 basis. I think you're asking me to speculate on
 14 something that I really can't in this context.

15 BY MR. SHAMBERG:

16 Q. Have there been instances when
 17 you've conducted these analyses where you have
 18 made a determination as to the cause of a
 19 failure without having received any information
 20 whatsoever as to the application in which the
 21 product is being used?

22 A. I've made a determination that
 23 there are oxidative-type failures, and I've
 24 made determinations that, you know, there could
 25 be possible contributing factors, but I've not

1 specified exactly what -- to my recollection
 2 exactly what those factors would be because I
 3 couldn't tell without an additional field
 4 evaluation.

5 Q. Okay. Fair enough. So then I
 6 want to -- so this email that Mr. Sexton sent,
 7 he sent on June 29, 2011, at 11:24 a.m.; is
 8 that accurate?

9 A. Based on what I have in front of
 10 me, yes.

11 Q. That's what the document says, at
 12 least. And if you look at the email above,
 13 it's an email from Ken McCoy to both Earl
 14 Sexton and Jarrod Brigham, and the document
 15 says that that was sent on Wednesday, June 29,
 16 2011, at 3:48 p.m.; is that accurate?

17 A. Based on what I see, yes.

18 Q. Okay. So that's about somewhere
 19 around four -- a little bit over four hours
 20 later, right? And in the email Mr. McCoy
 21 directs Jarrod Brigham to complete the PER as
 22 not defective application issue. I'll stop
 23 there. Is that accurate?

24 MR. KUHLMAN: Object to form.
 25 THE WITNESS: That's what I see

1 written on the document.

2 BY MR. SHAMBERG:

3 Q. Okay. So at some point in those
 4 four hours, Ken McCoy made the determination
 5 that the cause of this failure was an
 6 application issue rather than product defect,
 7 correct?

8 A. I don't know who made the
 9 determination, but, you know, I see the
 10 instruction to Jarrod to complete the PERs
 11 that's listed in the email.

12 Q. So someone made that
 13 determination?

14 A. That would appear to be correct.

15 Q. In those right around four hours,
 16 do you believe that would be sufficient time to
 17 conduct a field inspection?

18 A. You know, without being party to
 19 this, I don't believe I can answer that
 20 question. I believe you'd have to address it
 21 to the individuals that were involved. I don't
 22 know.

23 Q. It seems unlikely, though, right?

24 MR. KUHLMAN: Object to form.
 25 THE WITNESS: I just don't know.

1 (Thereupon, Plaintiffs' Exhibit 8,
 2 email chain Bates stamped NIBCO-Cole 00037118
 3 through NIBCO-Cole 00037121, was marked for
 4 purposes of identification.)

5 THE WITNESS: Okay.

6 BY MR. SHAMBERG:

7 Q. Okay. So I've showed you a
 8 document that's Bates stamped NIBCO-Cole
 9 00037118. Have you seen this document before?

10 A. Yes.

11 Q. Okay. And I want to focus first
 12 on this rather long email that Earl Sexton
 13 wrote on April 16, 2008, at 12:15 p.m. kind of
 14 at the bottom of the first page. Do you see
 15 where that's at?

16 A. Yes.

17 Q. Okay. In that email Earl Sexton
 18 states that second round of OIT testing was
 19 performed, and that the results showed that the
 20 terra cotta PEX tubing was falling into the
 21 marginal performance range. Is that what the
 22 document says?

23 A. It appears to, based on
 24 information provided by JANA at the time.

25 Q. And then Earl goes on to recommend

1 that notwithstanding the low oxidative
 2 stability times, that the stability of the
 3 terra cotta product should not be addressed at
 4 that time?

5 MR. KUHLMAN: Object to form.

6 BY MR. SHAMBERG:

7 Q. Is that what he recommends?

8 MR. KUHLMAN: Sorry. Object to form.

9 BY MR. SHAMBERG:

10 Q. And I'm specifically looking at
 11 the last page of the document with the 37121
 12 stamp.

13 A. As it was written here, that's
 14 what it appears to be.

15 Q. Do you recall now having any
 16 discussions with Earl Sexton at that time about
 17 whether to address the stability of the terra
 18 cotta product?

19 A. I don't remember. It's been a
 20 long time. I don't remember specific
 21 instructions. I do, though, remember at the
 22 time, you know, there was some discussion about
 23 OIT itself as an indicator. It was something
 24 that wasn't an ASTM standard requirement. It
 25 was listed as an optional tool. I mean, the

1 OIT level does not give an extrapolated length
 2 of time of service like the chlorine test does.
 3 I mean, there have been -- I myself have had
 4 some additional learnings about that
 5 methodology since the time that this email was
 6 written.

7 Like I said, I don't remember
 8 specifics because of the time frame that's
 9 elapsed since I've written this email, but, you
 10 know, I could probably better testify as to
 11 what my line of thinking may have been when I
 12 wrote this rather than, you know, Earl who will
 13 probably have to answer for himself.

14 Q. Sure. And that's why I wanted to
 15 ask whether you had any discussions with him,
 16 to see if you were privy to anything that he
 17 said. But -- so, yes, let's focus on, I guess,
 18 your response to Earl's email on the first page
 19 here. You bring up the idea of improving the
 20 OIT for the terra cotta color pipe and suggest
 21 that improving the stability time might be a
 22 better decision to prevent failures in the long
 23 run. Is that kind of what you're saying in
 24 this email?

25 A. That's what I wrote in this email,

1 but I've never seen data to substantiate that
 2 there would necessarily have been -- I can tell
 3 you based on what I see what my line of thought
 4 might have been when I put this together. I'm
 5 not an expert in OIT testing. You know, I've
 6 not had a lot of experience or any experience
 7 with it prior to.

8 When I look at it, when I look at
 9 results and see, you know, that a lab indicated
 10 that their opinion was that something was
 11 potentially low and I see a standard that says,
 12 you know, this may be an additional tool, you
 13 know, as a scientist and a, you know,
 14 supervisor of the quality department, I'm going
 15 to bring that up as a potential suggestion just
 16 because I'm going to make sure that, you know,
 17 we're doing everything we can to produce good
 18 product. But, you know, OIT, I've had learning
 19 since the time that I wrote this email that,
 20 you know, it may not be the tool necessarily
 21 that, you know, we thought it might have been
 22 at the time.

23 BY MR. SHAMBERG:

24 Q. In what way?

25 A. In what way? I have since learned

1 that, you know -- and granted, you know,
 2 there's no -- it's not a standard test that
 3 everyone's running in the industry. I have
 4 since learned that the actual number itself
 5 doesn't necessarily indicate -- you know, a 10
 6 is not necessarily worse than a 20. It depends
 7 on the quality of the anti-oxidant or the
 8 anti-oxidant system that's in the product.

9 This is information that, you
 10 know, I've learned from industry sources. I've
 11 not seen anything in practice to substantiate
 12 one way or another. What I'm told is that
 13 that's the reason why we do the chlorine test,
 14 to see if a 10 is sufficient for a particular
 15 formulation or a 20 is sufficient. I was not
 16 part of that research development so I really
 17 can't give you any hard numbers or, you know --
 18 I can't really give you a number to say this is
 19 sufficient or this isn't sufficient.

20 The only thing I can say is,
 21 looking back, you know, Earl does state with
 22 the terra cotta that -- you know, what was
 23 it -- 78 years was the extrapolated time. That
 24 met the ASTM standard. I really can't relate
 25 based on my current learnings what that 10 or

1 whatever, you know, the result was meant.

2 Q. Okay. Fair enough. But at least
 3 at the time, knowing what you knew then, you
 4 had some concern that the low OIT could
 5 potentially cause oxidative-type failures in
 6 the field, is that fair?

7 A. Well, I was copied on an email
 8 where that was proposed, you know, and I asked
 9 the question.

10 Q. Okay. So it was something that
 11 you felt should at least be considered as a
 12 possible failure mechanism?

13 MR. KUHLMAN: Object to form.

14 THE WITNESS: I thought that the
 15 question was worth asking.

16 BY MR. SHAMBERG:

17 Q. At the time of this email exchange
 18 and shortly thereafter, did NIBCO take any
 19 steps to improve the OIT for the terra cotta
 20 product?

21 MR. KUHLMAN: Object to form.

22 THE WITNESS: That I don't know.

23 BY MR. SHAMBERG:

24 Q. Did you have any discussions with
 25 anyone at NIBCO about the suggestion you made

1 in this email?

2 A. Honestly, I don't recall whether I
 3 did or didn't.

4 Q. Okay. But at least in response to
 5 the email, Earl seems to be recommending that
 6 you hold off on that project, is that true?

7 A. I see he indicates that he's
 8 working with JANA. You know, I don't recall
 9 the results or, you know, what transpired
 10 there, only what I see written here. It was
 11 2008. I just don't remember.

12 Q. Do you believe that Earl is
 13 correct when he says there's a risk delaying
 14 reformulation of the terra cotta color?

15 MR. KUHLMAN: Object to form.

16 THE WITNESS: I mean, based on, you
 17 know, what I see that I wrote at the time, I mean,
 18 I think there's a question that's being asked. I
 19 don't know that there's any data that would
 20 substantiate it one way or another. I just don't
 21 recall, you know, any additional conversation
 22 about this at the time.

23 BY MR. SHAMBERG:

24 Q. Okay. So the concern was raised
 25 at the time, and it may or may not have been

1 addressed?

2 A. That I don't know. I mean, I was
 3 only one member of the team. I was at the
 4 plant. Earl was a corporate product engineer.
 5 You know, I don't know beyond what I see
 6 written here what transpired.

7 Q. As a quality assurance manager at
 8 Lebanon --

9 A. I was a coordinator.

10 Q. As a quality assurance
 11 coordinator, quality coordinator at Lebanon, if
 12 a project were undertaken to improve the OIT of
 13 the terra cotta product that was being
 14 manufactured in Lebanon, is that something you
 15 would have needed to know?

16 A. Not necessarily, because that
 17 would not have been a test that we performed as
 18 part of the manufacturing process. That would
 19 have been something that would have been done
 20 with -- probably between corporate and JANA
 21 Laboratories as an R&D-type project.

22 Q. What would be done from a
 23 technical standpoint to improve OIT?

24 A. I just -- I don't know because I
 25 wasn't part of that. That's kind of beyond the

1 scope of my responsibilities.

2 Q. Would it require some kind of
3 change in the manufacturing method?

4 A. Not necessarily in the method.
5 Maybe in the materials. I mean, I just simply
6 don't know. I can't answer that question.

7 Q. Well, obviously, if the pipe just
8 continues to be produced in exactly the same
9 way using the exact same materials, colorant,
10 resin, extrusion process, et cetera, that's not
11 going to improve the OIT, right?

12 A. I mean, not unless there is an
13 improvement made to one of the materials. I
14 just -- you know, I don't know what or if -- to
15 my knowledge, there was no change in
16 formulation. I don't know, you know, what or
17 if, you know, anything was done with respect to
18 OIT. I don't know. I wasn't part of that
19 decision or follow-up.

20 Q. Okay. But as far as you know as
21 the quality coordinator, when that 1006 pipe
22 was produced, manufactured by NIBCO, it always
23 followed the same extrusion process, is that
24 true?

25 A. Right. But that wouldn't

1 Q. Do you have a recollection of that
2 occurring?

3 A. I have a recollection of the
4 initiation of this sometime after the
5 acquisition. I initially was responsible for
6 coordinating the listings of our products, and
7 I was working on the listings and testing for
8 the red tubing, and then shortly thereafter the
9 process was taken over by Earl.

10 Q. Okay. For a listing, you mean a
11 third-party certification?

12 A. Yes.

13 Q. It was taken over by Earl? During
14 what period of time were you responsible for
15 those listings?

16 A. I was responsible from 2004 -- or
17 about 2005, which is when I became solely CPI,
18 and then through the NIBCO acquisition until I
19 can't remember exactly when. It wasn't
20 immediate that the responsibility was
21 transferred, but it was within a year or two.
22 This is obviously 2008, so it was probably
23 sometime prior to this email. I can't tell you
24 how long prior that that responsibility was
25 transferred to Earl.

1 necessarily have anything to do with OIT or the
2 type of improvement that would be required to
3 change that.

4 Q. The same colorant was always used
5 for the 1006, right?

6 A. To the best of my knowledge, yes.

7 Q. Was the same resin also used for
8 the 1006?

9 A. To the best of my knowledge, yes.

10 Q. Aside from changes in dose, was
11 the same cross-linking process used for the
12 1006?

13 A. To the best of my knowledge, yes.

14 Q. And was the PEX-C tubing also cut,
15 marked, and coiled following the same process
16 as the 1006?

17 A. To the best of my knowledge, yes.

18 Q. If we go back to the last page of
19 this document, part of Earl's initial email on
20 this chain, right above where it says it is
21 recommended, he writes, we are currently
22 working with NSF to test red product for F2023
23 and develop an independent listing for this
24 product. Do you see that?

25 A. Yes.

1 Q. Who's Mark Clark?

2 A. Mark Clark is the standards and
3 codes manager at corporate.

4 Q. And is he also responsible for
5 dealing with third-party certifications?

6 A. Yes. He would work -- I mean, he
7 would be the individual that would be
8 responsible for obtaining the listings and then
9 for communications back and forth between the
10 certifying agencies. And then Earl would be
11 more of a technical engineer for research and
12 development that may be linked to that.

13 Q. Okay. So if I'm off base here,
14 tell me, but is it kind of a scenario that Mark
15 would be dealing with IAPMO or NSF or an entity
16 like that, and you or Earl would most likely be
17 dealing with JANA Labs or the testing entity
18 who was actually performing the testing for the
19 standard? Is that kind of how the split
20 worked, or is it different from that?

21 A. You know, when I first worked for
22 CPI only, I handled all of that. But after the
23 acquisition, it started to be transferred to
24 the appropriate departments, you know, within
25 the NIBCO scheme. Mark Clark -- and I don't

<p>1 want to speak for him -- based on my dealings 2 with him, you know, I would go to him for 3 communications back and forth between the 4 agencies.</p> <p>5 Like if we had an audit on site 6 and there were questions or follow-ups to the 7 audit, I'd work that through Mark Clark. If 8 there was a question as to laboratory testing, 9 then, you know, that would generally, yes, go 10 through Earl. But eventually, you know, the 11 coordination with those two things, the listing 12 agency was plus third-party testing. Those 13 were transferred to Mark and Earl.</p> <p>14 Q. So at the time of this email 15 exchange, which was April of 2008, you had 16 transferred those listing responsibilities that 17 you previously had over to Earl, is that true?</p> <p>18 A. Based on the context of the email, 19 it looks like it would have already occurred.</p> <p>20 Q. Okay. And I think you said with 21 respect to the project, to seek an independent 22 listing for the red pipe that you said that you 23 recalled the project being initiated. Do you 24 recall what the outcome was?</p> <p>25 A. It wasn't in my camp during the</p>	<p>1 A. Yes. 2 Q. Does this email indicate to you 3 that NIBCO did not obtain the independent 4 listing for the red colored pipe? 5 A. I see that they were in the 6 process of resolving some questions. I don't 7 recall what the outcome was. 8 Q. Okay. In the email Earl Sexton 9 states that JANA was conducting testing on the 10 red pipe and that the extrapolated failure time 11 was 43 years, right? 12 A. Based on the terra cotta profile, 13 yes. 14 Q. Based on the terra cotta profile? 15 What do you mean by that? 16 A. What I mean by that -- and this is 17 up to the point where, you know, I turned the 18 project over to Earl. I initially started the 19 project to do the red dependent transfer 20 listing. And what we had occur -- the 21 independent listing was terra cotta. And as 22 you saw in the previous email, the extrapolated 23 time to failure did, in fact, meet ASTM 24 requirements for the chlorine test. 25 The situation I ran into with the</p>
<p>1 outcome, but I remember initiating it. 2 Q. So no knowledge as to whether that 3 listing was obtained or not? 4 A. The follow-through would have been 5 Earl's responsibility. I don't remember all 6 the details, you know, only the start of the 7 listing for the red.</p> <p>8 (Thereupon, Plaintiffs' Exhibit 9, 9 email Bates stamped NIBCO-Cole 00036596, was 10 marked for purposes of identification.)</p> <p>11 THE WITNESS: okay.</p> <p>12 BY MR. SHAMBERG:</p> <p>13 Q. So, Ms. Premus, I've showed you 14 another document that's Bates stamped 15 NIBCO-Cole 000036596. Again, do you recall 16 seeing this document?</p> <p>17 A. I don't. I see that I'm copied on 18 it so, I mean, obviously, I did. I just don't 19 specifically remember it.</p> <p>20 Q. This is from August of 2008, so a 21 little over eight years ago?</p> <p>22 A. Right.</p> <p>23 Q. And this is about approximately 24 four months after the email exchange that we 25 were just previously discussing, correct?</p>	<p>1 red pipe was that actually the dependent 2 listing uses kind of a truncated smaller sample 3 set and puts the regression on the same curve 4 for what the independent listing is. 5 Basically, it's a condensed testing, assuming 6 that the linear regression is going to be the 7 same between the different colors. 8 I ended up with a situation where 9 I had samples running for longer than their 10 anticipated fail time for the red, indicating 11 at that time that, you know, we thought that it 12 was a better product. The only thing that this 13 email tells me is that, you know -- not 14 necessarily that the red was bad or that, you 15 know -- it says list 43 years. The reason for 16 that is the regression was simply -- it did not 17 fit the regression for the terra cotta product 18 as a dependent transfer. 19 Q. Okay. And I do want to ask you 20 some questions about that dependent listing for 21 the red product, but I'm just a little bit 22 confused because wasn't the idea behind the 23 testing being conducted here to obtain an 24 independent listing for the red pipe? 25 A. See, Earl took the project over.</p>

1 That was probably one of the outcomes as a
 2 result of the learning from, you know, the
 3 initial test where, you know, it became obvious
 4 that the regressions were not exactly the same
 5 between terra cotta and red. So that probably
 6 was a reason why he was seeking the independent
 7 listing as opposed to a dependent transfer.
 8 But I don't have the data necessarily or I
 9 can't recall, at least, the outcome of what
 10 that was. That wasn't something that I was
 11 handling at the time.

12 Q. But here in this email Earl's not
 13 talking about the extrapolated time to failure
 14 for the red based on the full data set from the
 15 terra cotta, correct?

16 MR. KUHLMAN: Object to form.

17 THE WITNESS: Well, actually, he is,
 18 because he's talking about the extrapolated data
 19 failure. That would be extrapolated based on
 20 those data points that were run probably regressed
 21 against the terra cotta curve.

22 BY MR. SHAMBERG:

23 Q. Okay. So if NIBCO wanted to get
 24 an independent listing for red tubing, what
 25 would NIBCO have needed to do to obtain that

1 independent listing?

2 A. I'm hesitant to answer because
 3 I -- you know, I wasn't party -- I would have
 4 to have been party to the negotiation or
 5 discussions with NSF, but at that time that was
 6 Earl's responsibility. You'd probably have to
 7 ask him that question.

8 Q. So there's no set protocol that
 9 defines the steps that a manufacturer has to
 10 take in order to attain an independent listing
 11 for a particular color?

12 A. I mean, they have a policy. That
 13 wasn't my responsibility at the time. It was
 14 transferred to Earl. I don't recall having
 15 that discussion with NSF. I can't tell you
 16 what their policy was at the time.

17 Q. Okay. There was a time period
 18 before Earl took over that those kinds of
 19 communications with the testing and listing
 20 agencies would have been your responsibility,
 21 right?

22 A. Yes. But those policies were in a
 23 constant state of change. The new standards
 24 were being applied and, you know, new learnings
 25 were occurring in the industry. I can't tell

1 you what it specifically was at the time Earl
 2 made this inquiry.

3 Q. At the time --

4 A. I --

5 Q. I'm sorry. I didn't mean to
 6 interrupt you.

7 A. No, I'm done.

8 Q. At the time that you were
 9 responsible for dealing with these listings and
 10 the testing associated with obtaining the
 11 listings, what steps would have needed to have
 12 been taken to obtain an independent listing for
 13 any particular color listing?

14 A. Well, at the time we had an
 15 unbroken listing of the product. I had a
 16 situation where I had a dependent transfer that
 17 was running, and we expected the fail time of
 18 those samples to be at a certain number of
 19 weeks; and those samples ran longer, meaning
 20 that even though samples ran longer than terra
 21 cotta, that we couldn't get an extrapolation.
 22 There's a penalty for the samples not falling
 23 within a certain, you know, period of time in
 24 the bracket, you know, surrounding what the
 25 expected fail time was.

1 So based on that penalty, we could
 2 not get an extrapolated failure time beyond
 3 50 years because those regressions did not fit
 4 together. At that point I don't remember
 5 discussing next steps because I was in the
 6 process of handing it over. So I don't know
 7 what the resolution and outcome was. I just
 8 know NSF was aware of it. They continued to
 9 list our product. We felt at the time it was a
 10 longer running sample, but actually it was not
 11 a product issue. It was a mathematical or
 12 extrapolation issue that we were facing.

13 Q. Okay. I'll move to strike that as
 14 nonresponsive. I'll try to ask what I'm
 15 getting at in a little different way. What's
 16 the difference between an independent listing
 17 and a dependent listing?

18 A. An independent listing has a full
 19 data set. The run time is approximately a
 20 year. And a dependent listing assumes that the
 21 product is similar enough to the original that
 22 it's going to fall along a similar curve. And
 23 so it uses a truncated set of data points that
 24 run for shorter lengths of time.

25 Q. So in order to obtain an

<p>1 independent listing for red tubing, NIBCO would 2 need to conduct testing on the red tubing that 3 included a full data set?</p> <p>4 A. Yes. That would run for about a 5 year in time.</p> <p>6 Q. But you're saying that's not the 7 testing that was being conducted here where the 8 time to failure was 43 years?</p> <p>9 A. Well, when I did -- you know, 10 we -- you would have to ask Earl specifically 11 about what he's commenting about. I know that 12 what I attempted to do was a dependent transfer 13 with a truncated data set, and we did not need 14 the extrapolation. I'm not sure if that was 15 the 43 years. I don't remember what the number 16 of years was that came out of that. But the 17 extrapolation time fell short because there was 18 a miner's rule and a penalty in the calculation 19 when the curves didn't align exactly as they 20 were expected to. The products were not as 21 similar as we thought they were essentially is 22 what that --</p> <p>23 Q. Okay. But even for an independent 24 listing, there's still necessarily some 25 extrapolation, correct?</p>	<p>1 because the curves are not exactly the same. 2 Q. Right. And I guess what I'm 3 asking is in this email and in that sentence 4 right here, do you know whether the 43 years is 5 based on a full data set --</p> <p>6 A. I don't know. 7 Q. -- for the red pipe? 8 A. I don't know based on this email. 9 Q. Okay. So you've touched on this a 10 little bit, and now I want to transition to 11 asking you about it more specifically. Are you 12 aware of any other instances in which red PEX-C 13 tubing manufactured by NIBCO has failed to meet 14 the 50-year requirement of F876?</p> <p>15 MR. KUHLMAN: Object to form. 16 THE WITNESS: I can't recall specific 17 reports at this time. 18 BY MR. SHAMBERG: 19 Q. You were mentioning a situation 20 where in your view there was a failure because 21 the pipe lasted too long? 22 A. Yes. Because the data points were 23 not similar enough between red versus terra 24 cotta that you could interplot them and get an 25 extrapolated result, a valid extrapolated</p>
<p>1 A. Yes. 2 Q. Because -- so, for example, if the 3 time to failure is deemed to be 78 years, 4 obviously, the test isn't running for 78 years, 5 right? 6 A. That's correct. It's an 7 accelerated aging test is what it is. 8 Q. Okay. But you don't -- so when 9 Earl says in this email this data is suggesting 10 extrapolated failure time of 43 years which 11 does not meet the 50-year requirement of F876, 12 I guess what you're saying is you're not sure 13 whether he's referring to independent listing 14 testing being conducted on a full data set or a 15 dependent listing based on extrapolations for 16 the red based on the terra cotta profile?</p> <p>17 A. Right. 18 Q. Is that what you're saying? 19 A. Basically for the data points that 20 you don't run on the dependent listing, you're 21 substituting terra cotta data points for. And 22 so if the terra cotta data points are not 23 indicative of exactly what the red would be, 24 then you get an extrapolation that doesn't 25 necessarily meet. It's a mathematical issue</p>	<p>1 result. 2 Q. Okay. That extrapolation is 3 performed, I think, according to a 4 mathematical -- there's a mathematical 5 calculation involved, is that right? 6 A. That's correct. 7 Q. Who performs that mathematical 8 calculation? 9 A. That would be the test laboratory, 10 JANA, that would be doing that. 11 Q. Do you know who developed that 12 formulation? 13 A. I really don't. 14 Q. Do you have any reason to doubt 15 the mathematical soundness of that formulation? 16 MR. KUHLMAN: Object to form. 17 BY MR. SHAMBERG: 18 Q. Formula? 19 A. One of the -- there were questions 20 during which time the method itself was being 21 implemented across industry. There was 22 actually a task force early in the process 23 where JANA, NSF, and various manufacturers 24 discussed some of these issues. I recall 25 talking about it not just with respect to our</p>

<p>Page 178</p> <p>1 company, but I recall others experiencing some 2 of the same issues. I don't have details of 3 who or more specific information. I do recall 4 that that was a question.</p> <p>5 Q. Do you recall when -- is there a 6 term that I should be using to refer to this 7 formula specifically? Is there a name?</p> <p>8 A. For the red PEX?</p> <p>9 Q. For just the formula that's used 10 to determine the extrapolated time to failure 11 for a dependent listing.</p> <p>12 A. Just the -- I guess dependent 13 versus independent. I mean, I don't know of a 14 specific term for it.</p> <p>15 Q. Well, if I call it the 16 mathematical formula, you'll know what I'm 17 talking about then?</p> <p>18 A. Yes.</p> <p>19 Q. I just want to make sure we're 20 using the same term. Do you recall when this 21 mathematical formula was first implemented?</p> <p>22 A. I do not.</p> <p>23 Q. Was it after you started at CPI?</p> <p>24 A. I don't know.</p> <p>25 Q. Do you know whether that</p>	<p>1 provides to NIBCO?</p> <p>2 MR. KUHLMAN: Object to form.</p> <p>3 THE WITNESS: I mean, I had no reason 4 to, no. I mean, like I said, we didn't believe it 5 was a product issue. It just seemed to be a 6 mathematical issue that we were dealing with based 7 on the way the standard was written.</p> <p>8 BY MR. SHAMBERG:</p> <p>9 Q. But as far as you know, no changes 10 have been made to that mathematical formula in 11 the last decade?</p> <p>12 A. I don't know.</p> <p>13 Q. Can you just explain to me again 14 why the mathematical formula in its application 15 resulted in the red pipe having an extrapolated 16 time to failure that was fewer than 50 years?</p> <p>17 A. Without it in front of me and 18 going back over that, I could not sit here and 19 today -- it's been a long time since I've 20 looked at that. You know, I cannot give a more 21 detailed explanation at this point.</p> <p>22 Q. Okay. But I think you said there 23 were certain data points that were outside of a 24 required range?</p> <p>25 A. Not required. It's just that, you</p>
<p>Page 179</p> <p>1 mathematical formula is still used today?</p> <p>2 A. I do not.</p> <p>3 Q. Do you have any reason to believe 4 that JANA has stopped using that formula to 5 determine extrapolated times to failure?</p> <p>6 A. I have no knowledge to that 7 effect.</p> <p>8 Q. Do you know what the formula is 9 itself? Like could you write it on a 10 blackboard if we had one?</p> <p>11 A. Not without going through the 12 standard.</p> <p>13 Q. Would you be able to -- if given 14 data points, be able to actually conduct the 15 calculations and arrive at an answer according 16 to that mathematical formula?</p> <p>17 A. If I had the standard and if I had 18 time to familiarize myself with the process. 19 I've not been through it personally before.</p> <p>20 Q. Is JANA generally a well regarded 21 testing laboratory?</p> <p>22 A. They did the NSF testing at the 23 time.</p> <p>24 Q. Do you have any reason to doubt 25 the veracity of the test results that JANA</p>	<p>Page 181</p> <p>1 know, we took certain points data on that 2 regression curve, there was obviously fewer for 3 the red. The ones that were run on the red 4 were put into that plot, but for the conditions 5 at which the red was not run, data points for 6 terra cotta were used in that regression, and 7 they apparently did not line up in a manner 8 that when you apply the mathematical formula 9 that the extraction or that the extrapolation 10 worked according to, you know -- if the 11 regression curves were exactly the same, you 12 should have been able to interplot them in the 13 case of terra cotta versus red. They were not, 14 you know, and basically the two points that 15 resulted in the low extraction number instead 16 of failing at the time that they were expected 17 to fail based on when the terra cotta samples 18 failed, they continued running for weeks longer 19 than the terra cotta did under those 20 conditions.</p> <p>21 Q. Are you familiar with the 22 mathematical term outlier?</p> <p>23 A. Yes.</p> <p>24 Q. Okay. What's an outlier?</p> <p>25 A. An outlier is something that</p>

1 doesn't fall on a linear set of data points.
 2 It falls outside of an expected range.
 3 Q. Based on that definition, do you
 4 believe that some of the data points that were
 5 involved in the red dependent listing were
 6 outliers according to the mathematical formula
 7 that JANA was applying at the time?

8 A. Not necessarily.

9 MR. KUHLMAN: Object to form.

10 THE WITNESS: Not necessarily. I
 11 mean, you can't -- I don't think there's enough
 12 information to determine that. Like I said, it's
 13 been a long time. It's been a long time since
 14 I've went through the standards with respect to
 15 that. You know, I don't know that I can further
 16 elaborate at this time.

17 BY MR. SHAMBERG:

18 Q. Okay. But the bottom line was
 19 that the outcome was that the red pipe failed
 20 to meet the 50-year requirement?

21 MR. KUHLMAN: Objection to form.

22 THE WITNESS: The outcome was that
 23 two samples ran for weeks longer than they were
 24 anticipated to run, and therefore the calculation
 25 didn't meet the dependent listing requirements.

1 And that's all I can say at the time that I
 2 handled that process.

3 BY MR. SHAMBERG:

4 Q. Okay. Based on the outcome then
 5 and based on that testing and the mathematical
 6 formula, NIBCO could not have printed ASTM F876
 7 compliant on its red pipe, correct?

8 MR. KUHLMAN: Object to form.

9 THE WITNESS: That's not true because
 10 NSF maintained an unbroken listing for the
 11 product. The product continued to be listed
 12 because NSF felt that it wasn't a product issue,
 13 that it was a mathematical and extrapolation issue
 14 that we were working through. So they continued
 15 to certify our product through that process.

16 BY MR. SHAMBERG:

17 Q. How did you become aware that JANA
 18 believed it was a mathematical issue and not a
 19 product issue?

20 MR. KUHLMAN: Object to form.

21 THE WITNESS: Because I was in
 22 contact with both JANA and NSF discussing the
 23 situation.

24 BY MR. SHAMBERG:

25 Q. Was that situation ever resolved?

1 A. That was transferred to Earl.
 2 Like I said, I did not see the completion of
 3 the project with red.

4 Q. Is it possible for PEX tubing to
 5 fail in the field even if it meets all
 6 necessary third-party certifications standards?

7 A. Potentially, yes, because there
 8 are factors other than manufacturing that can
 9 contribute to a failure in the field.

10 Q. If a product -- if PEX tubing
 11 meets all of the necessary third-party
 12 certification standards, is it still possible
 13 for that tubing to fail in the field due to a
 14 manufacturing or design defect?

15 MR. KUHLMAN: Object to form.

16 THE WITNESS: There may be specific
 17 cases where the product is certified, but, for
 18 example, there was a section where there was a
 19 thin wall that was a manufacturing defect.
 20 Potentially you could have a failure as a result
 21 of something like that. So, you know, there are
 22 cases where that could occur. There are cases and
 23 situations in the field such as the environment or
 24 installation or usage, any number of things, can
 25 also contribute to a failure with or without a

1 manufacturing component. And one failure may not
 2 necessarily have the same cause as the next.

3 BY MR. SHAMBERG:

4 Q. But simply meeting the
 5 specification doesn't guarantee performance in
 6 the field, right?

7 A. The product has to be installed
 8 correctly and it has to be used under normal
 9 conditions, under the conditions of listing.
 10 So, I mean, there are circumstances where it
 11 potentially could fail for any number of
 12 reasons.

13 Q. But in your view, if a product's
 14 met the relevant specifications and failed,
 15 that failure would not be attributable to any
 16 fault on NIBCO's part?

17 MR. KUHLMAN: Object to form.

18 BY MR. SHAMBERG:

19 Q. Is that what you're saying?

20 A. Not necessarily. It's on a
 21 case-by-case basis. I mean, it may be found in
 22 one evaluation that there could have been a
 23 manufacturing defect. It may be found in
 24 another investigation that it was
 25 environmental.

<p style="text-align: right;">Page 186</p> <p>1 MR. KUHLMAN: We've been going for 2 about an hour and a half. Are you at a reasonable 3 short stopping point?</p> <p>4 MR. SHAMBERG: Yeah. We can take 5 five minutes.</p> <p>6 (Pause in proceedings.)</p> <p>7 (Thereupon, Plaintiffs' Exhibit 10, 8 email chain Bates stamped NIBCO-Cole 00092974 9 through NIBCO-Cole 00092977, was marked for 10 purposes of identification.)</p> <p>11 BY MR. KUHLMAN:</p> <p>12 Q. So I've now shown you another 13 document, NIBCO-Cole 00092974 is the Bates 14 number on the first page. Have you seen this 15 document before?</p> <p>16 A. Yes. I vaguely remember it.</p> <p>17 Q. And I want to start by turning to 18 the last page of the document. We're looking 19 at the very last, first chronologically, email 20 on here that you wrote on Friday, January 15 at 21 4:17 p.m. Do you see that email?</p> <p>22 A. Yes.</p> <p>23 Q. The subject is quality report, and 24 is it fair to say that this email is describing 25 your evaluation of a particular PER?</p>	<p style="text-align: right;">Page 188</p> <p>1 that that occurred relative to the acquisition. 2 I know that we manufactured it for roughly a 3 year. Like I said, I can't give you a date 4 when it started or stopped.</p> <p>5 Q. Okay. I'm just wondering whether 6 it's possible that NIBCO itself could have 7 manufactured a product that was branded 8 NEXT-Pure.</p> <p>9 A. I believe it terminated prior to 10 the acquisition, but I can't remember for sure.</p> <p>11 Q. So maybe, maybe not; it's just a 12 question of the timing?</p> <p>13 A. Right. I don't -- I can't give 14 you an exact timing relative to the 15 acquisition.</p> <p>16 Q. Okay. So in this email you said 17 there are two things of note in the 18 investigation, the first being that the 19 customer is in the Lebanon, Missouri, area, 20 rather than the Charlotte and Mobile areas in 21 which we have been seeing this kind of failure. 22 Do you see that?</p> <p>23 A. Yes.</p> <p>24 Q. And this kind of failure means the 25 oxidative-type failure?</p>
<p style="text-align: right;">Page 187</p> <p>1 A. Maybe not the full evaluation, but 2 it's in reference to a PER.</p> <p>3 Q. Yeah. That's fair. And that that 4 PER dealt with an oxidative-type failure in PEX 5 tubing, correct?</p> <p>6 A. Yes.</p> <p>7 Q. And it appears that this was 8 actually a product that was manufactured by CPI 9 prior to the acquisition by NIBCO, right?</p> <p>10 A. Actually, I can't tell you the 11 date of manufacture because, as I specified 12 right in here, I didn't have a date. The only 13 thing that would give kind of a semi time frame 14 would be that the product was branded 15 NEXT-Pure.</p> <p>16 Q. Did NIBCO itself ever manufacture 17 a product branded NEXT-Pure?</p> <p>18 A. Prior to the acquisition, we 19 manufactured it for them for -- I don't have an 20 exact length of time. Maybe about a year prior 21 to the acquisition.</p> <p>22 Q. Okay. Did NIBCO continue 23 manufacturing NEXT-Pure after the acquisition?</p> <p>24 A. The NEXT-Pure name was 25 discontinued. I can't give you an exact date</p>	<p style="text-align: right;">Page 189</p> <p>1 A. I would assume, based on the 2 context of this email was written.</p> <p>3 Q. Okay. So what oxidative-type 4 failures was NIBCO seeing in the Charlotte and 5 Mobile areas at that time?</p> <p>6 A. I mean, when I first started, and 7 the NEXT-Pure would have been about 2005, I 8 would have only worked for the company for 9 maybe only about a year by the time NEXT-Pure 10 went into production. So, you know, the very 11 first samples that I saw in returns, a few of 12 them, you know, were from the Charlotte and 13 Mobile area that had oxidative-type failures.</p> <p>14 As somebody that works in quality, 15 you know, my first reaction is if I see 16 anything that appears to be different than I've 17 seen before, I point it out. As it turns out, 18 you know, my subsequent finding was that at 19 that particular time Charlotte and Mobile and 20 those areas were where the bulk of our product 21 was distributed. So there's probably a 22 correlation with the amount of PEX sold in that 23 area.</p> <p>24 Q. More sales in a particular area 25 are probably going to result in more failures</p>

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<p>1 just because there's more of the product?</p> <p>2 A. Correct.</p> <p>3 Q. That's what you're saying? Okay.</p> <p>4 In your time conducting product return analyses</p> <p>5 for the PEX tubing, do you recall about how</p> <p>6 many oxidative-type failures you received from</p> <p>7 the Charlotte and Mobile areas?</p> <p>8 A. I can't.</p> <p>9 Q. Collectively?</p> <p>10 A. Specifically -- I mean, we sold</p> <p>11 millions and millions and millions of feet down</p> <p>12 there without claims, so, you know, I can't</p> <p>13 give you a specific number. It wasn't a huge</p> <p>14 number.</p> <p>15 Q. But enough, I guess, that you</p> <p>16 noticed that there were these oxidative-type</p> <p>17 failures occurring specifically in these</p> <p>18 geographic areas with greater frequency than</p> <p>19 others?</p> <p>20 A. There were more than one. Not a</p> <p>21 large number but, you know, there were more</p> <p>22 than one -- there was more than one failure in</p> <p>23 that general region. That was also where we</p> <p>24 distributed the greater percentage of our</p> <p>25 tubing at the time.</p>	<p>1 been one customer with multiple claims.</p> <p>2 Q. Okay. Would San Antonio, Texas,</p> <p>3 be one of those areas?</p> <p>4 A. That would be one example.</p> <p>5 Q. Can you think of any other</p> <p>6 examples?</p> <p>7 A. Not off the top of my head.</p> <p>8 Q. Okay. Next I want to go back just</p> <p>9 one page to the one that's Bates numbered</p> <p>10 ending in 92976. And I want to ask you a</p> <p>11 question about the email you sent on</p> <p>12 January 25th at 2:33 p.m. Do you see that</p> <p>13 email?</p> <p>14 A. Yes.</p> <p>15 Q. Okay. So there's been a</p> <p>16 discussion of what testing would be appropriate</p> <p>17 to perform on this sample, and here you're</p> <p>18 saying essentially that you don't believe gel</p> <p>19 content testing will give you too much</p> <p>20 information about the cause of the failure but</p> <p>21 that OIT testing might give a better answer;</p> <p>22 does that accurately describe what you're</p> <p>23 saying here?</p> <p>24 MR. KUHLMAN: Object to form.</p> <p>25 THE WITNESS: That's what I wrote.</p>
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1 things in industry. I can't tell you what I
 2 read or on what date at this point.

3 Q. At least as of the date of this
 4 email, you felt that there could potentially be
 5 some value to the OIT testing in terms of
 6 determining a cause of the oxidative-type
 7 failures, right?

8 A. At the time I wrote this, it looks
 9 like I'm proposing that it's a possibility,
 10 but, you know, like I said, I'm not an expert
 11 in OIT testing. You know, it was something
 12 that I thought possibly, but I -- like I said,
 13 I wasn't completely sure. I've had subsequent
 14 learnings that, you know, maybe the OIT is not
 15 required by the standard, probably the reason
 16 is because it does have some limitations in the
 17 information that it provides.

18 Q. But I guess if you thought it
 19 was -- if it would have no value whatsoever,
 20 then you wouldn't suggest it, right?

21 A. Not necessarily. I'm suggesting
 22 it as a possibility. I mean, if there's
 23 something that possibly might give us an
 24 answer, I mean, it may or may not, you know, if
 25 I have an idea, I'm going to suggest that we

1 for this type of failure analysis and was used
 2 in the report I sent yesterday, Earl has
 3 indicated that recent work done during PEX
 4 reformulation seems to suggest that this method
 5 may not show reliable correlation with chlorine
 6 resistance. Did I read that right?

7 A. Yes.

8 Q. So was the basis for your
 9 understanding that you gained that OIT testing
 10 may not be as helpful as you had originally
 11 thought Earl Sexton telling you that?

12 A. Exclusively that, no. If you look
 13 at the way that I worded this, I wrote seems to
 14 suggest and may not. I do recall reading
 15 industry literature, but I don't recall the
 16 title of the publication. It was a researcher
 17 that wrote some -- I mean, I went out and I
 18 looked for industry literature to educate
 19 myself on the process. It's been a long time,
 20 so I can't give you exact specifics.

21 But basically what the industry
 22 literature was saying was that the OIT number
 23 itself doesn't necessarily respond to a number
 24 of extrapolated years. Actually, I spoke to a
 25 chemist also who told me that it depends on the

1 maybe look at that.

2 Q. But in the email you say that in
 3 your opinion OIT testing is likely to give us a
 4 better answer, and we did see a correlation
 5 with the NST samples, right? That's what the
 6 email says at least?

7 A. That's what the email says;
 8 however, in retrospect, looking back, we only
 9 had a very small handful of OIT tests that were
 10 run, and I didn't have as much of an
 11 understanding of the tests or the meaning of
 12 those results at that time.

13 Q. Well, it seems to me that you
 14 gained it pretty quickly, right? Because let's
 15 go -- flip back one page. So now we're at
 16 Bates stamp 92975. And there's another email
 17 from you on Wednesday, January 26, 2011, at
 18 10:34 a.m. Do you see that email?

19 A. Yes.

20 Q. And that's one day after the email
 21 we were just discussing, correct?

22 A. Yes.

23 Q. And in this January 26th email,
 24 one of the paragraphs starts OIT, and you say
 25 although this method was recommended by JANA

1 quality of the anti-oxidant system that we have
 2 as to whether it's a 40 or a 30 or 20 or a 10
 3 would be considered sufficient.

4 It's not -- you can't use a number
 5 and say that, you know, this is good for all
 6 formulations. It may or may not be. That's
 7 what your chlorine testing has to show you.
 8 The oxidative testing does not provide that
 9 extrapolation data. And then the other thing
 10 that the articles seemed to indicate is that
 11 your oxidative OIT value could go from high to
 12 low very quickly in the first few weeks or
 13 months of usage and remain low throughout the
 14 period of time, but that does not necessarily
 15 mean that your product is not protected.

16 So, you know, there are some
 17 things that were in the literature that I found
 18 that, you know, I didn't just take somebody
 19 telling me, no, it's not good. I went out just
 20 because I wanted to find out the information
 21 for myself, whether or not I felt that there
 22 would be value in it. And apparently there was
 23 more controversy than I originally knew with
 24 regard to the test. But, you know, I saw it
 25 listed and I threw it out as a possibility at

1 the time, and I'm just describing the
2 conversation that I had with Earl.

3 Q. Okay. So I guess in this time
4 period at least, is it fair to say that you
5 really weren't sure one way or the other
6 whether OIT testing would be beneficial in
7 determining the cause of the oxidative-type
8 failures?

9 A. That's probably a fair assessment:
10 I mean, it was thrown out as a possibility to
11 look into to resolve a customer claim.

12 Q. Then you also in this January 26th
13 email, you restate that you don't believe that
14 gel testing is likely to get to the root cause
15 of the failure, right?

16 A. Yes.

17 Q. And that's based on your past
18 experience seeing little correlation between
19 oxidative-type failures and low stability in
20 the product, right?

21 MR. KUHLMAN: Object to form.

22 THE WITNESS: It was based on my
23 observation between gel values and the visual
24 appearance of an oxidative-type failure. I
25 requested permission when I saw those samples come

1 the standard that was put out for industry at
2 the time.

3 Q. But at least in your view, that
4 testing might show compliance with the
5 specification, but it wouldn't identify the
6 cause of the particular failure at issue?

7 A. Right. It would show that we
8 manufactured the product to spec, but as we
9 talked about earlier, I mean, you could have a
10 product that meets all specifications. But if
11 it's exposed to something that, you know,
12 wouldn't be considered an ordinary condition of
13 use or is used in a way that isn't according to
14 the listing or some other environmental factor
15 comes into play, I mean, those things can cause
16 a premature failure as well.

17 Q. Do you recall what testing was
18 ultimately performed on this particular sample?

19 A. I can't. Not sitting here at this
20 time.

21 Q. If we go to the first page of the
22 document, there's an email from Randy Doering
23 on Friday, January 28th, 8:24 a.m. Do you see
24 that?

25 A. Yes.

1 in to, as part of a routine evaluation for a
2 period of time, automatically send out gel
3 testing, and what we found was there was no
4 correlation between gel percentage and
5 oxidative-type claims that were coming in relative
6 to production that, you know, didn't have a claim
7 of failure.

8 BY MR. KUHLMAN:

9 Q. Do you recall what the sample size
10 was for that determination?

11 A. I don't recall. I mean, it might
12 have been in the neighborhood of maybe 20
13 samples or so. I mean, it was more than just a
14 few.

15 Q. Okay. So you mentioned that the
16 gel test is not likely to give a root cause for
17 the failure, but an additional test that could
18 demonstrate that the product at issue here was
19 manufactured according to the ASTM F876
20 standard?

21 A. Right. And the standard says you
22 need to be within a certain tolerance for OD,
23 wall, gel, and a number of other tests. And it
24 was just one additional test that we could do
25 to show that we, in good faith, manufactured to

1 Q. And he says, okay, on this sample
2 which had no evidence of swelling, let's send
3 it I (sic) and get a positive ID on the gel.
4 What is lead time? So he's asking specifically
5 about the gel testing, right?

6 A. Yes.

7 Q. In this email does he ask about
8 conducting OIT testing?

9 A. I don't see that.

10 Q. Does he ask about conducting
11 extraction and FTIR testing?

12 A. I see that in reference to a
13 conversation he had with another individual.

14 Q. Okay. Where do you see that?

15 A. I see that on page 2. Actually,
16 page -- the end of page 1 and the beginning of
17 page 2.

18 Q. Okay. And in that email you're
19 talking about for Randy Doering Thursday,
20 January 27, 2011, 4:58 p.m., does he also say
21 it seems to be that we need to develop this
22 same level of inhouse evaluation? Do you see
23 where he says that?

24 A. I see where he mentions that in
25 the one paragraph.

1 Q. And is he referring to that
 2 extraction and FTIR testing that I mentioned
 3 there?

4 A. I don't know if he's specifically
 5 referring to those. I've never found any other
 6 reference to those tests being performed on
 7 PEX. You know, it's been so long, I can't
 8 remember specifically what the outcome of this
 9 was, but I know that those aren't typical tests
 10 that are run for PEX tubing. They're not
 11 mentioned in the standards.

12 Q. Okay. So that's fair enough. In
 13 his email on January 28th at least on the first
 14 page, he's strictly asking about the gel
 15 testing, though, right?

16 A. Yes.

17 Q. And that was the testing based on
 18 the previous emails in the chain that was least
 19 likely to get to the root cause of the failure,
 20 correct?

21 A. Well, I mean, I couldn't say that
 22 it's more likely or least likely than any of
 23 the other methods listed. I mean, the other
 24 methods were proposed as just other ideas. I
 25 mean, it could have been that they told us

1 nothing, but I just simply don't know.

2 Q. Well, you had described the gel
 3 test as not likely to give a root cause for the
 4 failure, right?

5 A. Based on testing that I had done,
 6 I didn't have data on any of the other
 7 procedures.

8 Q. But at least in your January 25th
 9 email, you had taken the position that the OIT
 10 testing is likely to give a better answer as to
 11 the cause than the gel testing, right?

12 A. That was a speculation at the
 13 time. I mean, like I said, I'm not an expert
 14 in it. You know, I've never seen data to
 15 support that. I don't know why I wrote it that
 16 way. Obviously, looking at the discussion that
 17 I had with Earl, obviously, you know, we
 18 discussed that. I don't remember the details
 19 at this time.

20 You know, basically, what I would
 21 have been doing is looking at standards and
 22 seeing, okay, this was a nonmandatory method
 23 that was mentioned as a potential tool, you
 24 know, so I'm throwing it out there as part of
 25 our team and for discussion.

1 Q. Okay. So in retrospect, it might
 2 have been more accurate to say the OIT testing
 3 may or may not give us a better answer?

4 A. Correct.

5 Q. Then just to finish up with this
 6 document, in the very, I suppose,
 7 chronologically last email but the very first
 8 one on the first page, it's an email that you
 9 sent on February 1st, 2011, and you are
 10 identifying another oxidative-type failure
 11 involving NIBCO tubing in Olney, Texas, is that
 12 right?

13 A. Based on the email, yes.

14 Q. So now in this email chain we've
 15 heard references to oxidative-type failures in
 16 Mobile, Charlotte, Lebanon, Missouri, and
 17 Olney, Texas, correct?

18 A. Yes.

19 Q. Given the geographic disbursement,
 20 did you have any concern at the time that the
 21 oxidative failures might be due to the product
 22 itself rather than to environmental factors?

23 A. Not specifically. I was just at
 24 this point, you know, it appears -- again, it's
 25 been a while since this email transpired. You

1 know, it appears from this email that I'm just
 2 saying heads up, you know, here comes one
 3 that -- you know, this is from an area
 4 different than I've seen before. But on the
 5 other hand, these failures -- I mean, I started
 6 working for E-BEAM in 2004.

7 By 2005 I went to CPI exclusively.
 8 That was approximately when I started getting
 9 involved in the evaluations of these samples.
 10 This is 2011. But typically, you know, four to
 11 six, sometimes ten years pass between the time
 12 that a sample gets installed and you actually
 13 see the failure in the field. So, you know, at
 14 some point, I can't tell you whether it was
 15 when this email was written, but maybe around
 16 that particular time, you know, I started
 17 seeing now samples coming in from different
 18 areas than where I had analyzed to begin with.

19 When I first started, we only had
 20 two extrusion lines, you know, and our business
 21 was much smaller, and apparently at that time
 22 the majority of our product was distributed in
 23 the Charlotte and Mobile area through one of
 24 our distributors down there. So, you know,
 25 just all I'm doing in this email based on what

<p style="text-align: right;">Page 206</p> <p>1 I can recall and what I see I wrote here 2 because, again, it's been a long time, is just 3 pointing out something that appears to me on 4 the surface to be different.</p> <p>5 Q. Does NIBCO have a warranty that 6 covers its PEX tubing?</p> <p>7 A. Yes, it does.</p> <p>8 Q. Do you know what the terms of the 9 warranty are?</p> <p>10 A. I can't recite the fine print 11 without looking at a copy of it. It does have 12 a number of years that we warrant the product 13 for depending on whether -- the number of 14 years, depending on whether the product is used 15 with our fittings or with a set of fittings 16 that are, you know, not of a NIBCO origin.</p> <p>17 Q. If a plumbing application is 18 installed using only NIBCO tubing, let's say, 19 and a different manufacturer's fittings and 20 clamps, do you know what the time of the 21 warranty is?</p> <p>22 A. You know, I'd really have to look. 23 I know it's shorter than if they use our 24 fittings with the tubing.</p> <p>25 Q. So in this email we've been</p>	<p style="text-align: right;">Page 208</p> <p>1 looking for trends in the PERs that came in? 2 Is that true or not?</p> <p>3 A. I think it would depend on who was 4 doing the evaluations at the time. You know, I 5 had a weekly quality report that I put out that 6 didn't trend it by root cause, but it trended 7 it by type of failure that came in. But that 8 was the plant level specifically dealing with 9 our product and no other location.</p> <p>10 Q. During what time period were you 11 creating those weekly quality reports?</p> <p>12 A. That would have been during the 13 time that I was evaluating the product, so up 14 until roughly maybe 2013.</p> <p>15 Q. Okay. Starting I guess in 2006 16 when NIBCO acquired CPI?</p> <p>17 A. I can't remember exactly when I 18 started trending it. I mean, when I first 19 started, there was no formal process for 20 tracking those things. I started that system 21 myself just so that I could keep a running 22 spreadsheet and track claims that came in. I 23 numbered them locally by the last two digits of 24 the year, hyphen, with then the number of the 25 claim that came in on that year.</p>
<p style="text-align: right;">Page 207</p> <p>1 focusing on a few specific PERs that came into 2 NIBCO. Talking more generally about PERs, 3 what's the purpose of tracking PERs from 4 NIBCO's perspective?</p> <p>5 A. Just so that we see how many come 6 in during a particular year and if we see 7 repeats of the same type of issue.</p> <p>8 Q. Okay. So that was actually going 9 to be my next question. Is there someone at 10 NIBCO who's tasked with looking for trends in 11 the PERs that come in?</p> <p>12 A. The technical services department, 13 I believe at the time, published -- and I don't 14 know. I'm not on the distribution for that 15 now. I believe at one time they published a 16 trend, and I also have a report when I was 17 doing the PER evaluations that I would put out.</p> <p>18 Q. So technical services. How long 19 was Ken McCoy the manager of technical 20 services? When did he start in that role 21 approximately?</p> <p>22 A. You know, I can't remember. I 23 would just be speculating.</p> <p>24 Q. Okay. But during his tenure, he 25 would have had the primary responsibility for</p>	<p style="text-align: right;">Page 209</p> <p>1 Q. Do you know whether you provided 2 those quality reports to your attorneys in 3 connection with this lawsuit?</p> <p>4 A. I turned over all the 5 documentation. They would have been contained 6 within that.</p> <p>7 Q. Okay. What do you mean by that 8 exactly? Because the quality reports were 9 documents, right, that you created?</p> <p>10 A. I mean, I know it's been turned 11 over because I've seen it in previous 12 depositions. Basically, it was a spreadsheet 13 that had a list of claims by year, you know, 14 and the very last tab of that, if you had that 15 spreadsheet, they had to have access to the tab 16 that had the trend charts on it, too. It was 17 an electronic file.</p> <p>18 Q. Okay. So when you were talking 19 about these weekly quality reports, I guess in 20 my mind I was envisioning, you know, a document 21 weekly quality report that had the information 22 in it and there would be a different one 23 produced each week. But you're saying that's 24 not the case? It was really kind of one living 25 document?</p>

1 A. It was one spreadsheet that was
2 just added to on a weekly basis.

3 Q. Okay. I see. Would you
4 periodically go back to review that document to
5 see kind of the larger trends over weeks or
6 months?

7 A. I would look at it every time I
8 made an entry into it with a new claim because
9 that would factor into the charts that I had on
10 the last page.

11 Q. Okay. I mean, I understood you
12 looked at it when you updated it, but were you
13 looking at it specifically to see what the
14 trends were in certain failures over time?

15 A. Periodically, yes.

16 Q. Do you recall any trends that you
17 observed with respect to the PEX-C tubing?

18 A. I mean, we had certain categories
19 of -- I mean, overall our number of claims were
20 relatively small compared to the number of feet
21 of product that we put out in the market. I
22 mean, we put millions and millions and millions
23 of feet out. There were certain claims that
24 didn't occur at a high frequency but were maybe
25 higher with respect than others.

1 Q. And when you say claim, claims
2 that you received, are you referring then to
3 situations where a product return authorization
4 form was issued and a product was sent into
5 NIBCO for testing?

6 A. A product was sent to our site for
7 testing. I didn't -- I only trended what was
8 processed through our location.

9 Q. Right. And so let me just
10 clarify. When we're talking about this topic
11 and your quality reports, I am limiting that to
12 just the PEX tubing that was manufactured at
13 Lebanon, so that's really what my questions are
14 about, okay? I'm not asking about broader
15 products. What trends did you observe in the
16 PEX-C tubing failures?

17 A. I mean, there were certain types
18 of -- or categories. I can't -- you know, it's
19 been a couple of years. I can't remember
20 exactly how I had it set out. I mean, it was
21 something that I generated for internal
22 purposes at our location.

23 There were sometimes -- you know,
24 dimples or cosmetic defects, oxidative leaks
25 were another category that we had, you know,

1 that we saw, you know, relative to the other
2 claims coming in, you know, maybe a few more of
3 those. But, I mean, again, the numbers were
4 relatively small relative to the number of
5 customers and the amount of PEX that we put
6 out. But, yes, that was something that we saw
7 in our trend charts.

8 Q. Okay. Let me ask this. If a
9 customer called NIBCO and said I have
10 experienced an oxidative-type failure in my
11 NIBCO tubing, but that customer did not
12 ultimately complete the product return
13 authorization form and did not send a sample in
14 to you at that point for analysis of the
15 sample, would that complaint about an
16 oxidative-type failure have been included in
17 this spreadsheet that we've been discussing?

18 A. First, I'm unaware of any specific
19 cases where that's happened, but my trend chart
20 was for the results of the evaluations
21 completed at Lebanon. So regardless of the
22 root cause for an oxidative failure, if it was
23 an oxidative failure, it was reported as such
24 in that category. If it was something that I
25 did not see or examine myself -- and, again,

1 you know, I'm not aware of that happening --
2 that would not be reflected in my trend chart.

3 Q. Are the failure analyses that you
4 perform and the results that you arrive at
5 through that analysis shared with the customer
6 who initiated the PER?

7 A. No. That's an internal tracking
8 process.

9 Q. Why doesn't NIBCO share those
10 results with the customer?

11 A. Because it's an internal process.
12 I mean, it's a pooled document that has all
13 claims together. It's just an internal
14 tracking process that we have at the Lebanon
15 facility. What was shared was, you know,
16 through technical services when they responded
17 to the customer the results of that particular
18 evaluation involving their product.

19 Q. Is it also because NIBCO would not
20 want to share results that reflected poorly on
21 NIBCO with a customer?

22 A. That was never a reason that was
23 discussed. I mean, it was just something that
24 I personally generated to track my work that I
25 was doing so that, you know, if somebody called

1 me and said do you remember that evaluation
 2 that you did three years ago, that spreadsheet
 3 was primarily a result of tracking that. But I
 4 also on a Mac pad put a tab in where I
 5 basically took the data and I basically put it
 6 into categories and just for my only personal
 7 tracking purposes.

8 Q. All right. So I understand that
 9 the decision as to whether to share those
 10 analyses with the customer wasn't your
 11 decision.

12 A. Well, and the data, too, could
 13 provide -- could potentially provide a skewed
 14 result. I could have one individual customer.
 15 They might have had, you know, X number of
 16 houses. If they had ten houses and they said,
 17 you know, we have a leak and, you know, we're
 18 calling all of these houses, you know, part of
 19 the claim, they would have ten separate
 20 entries, you know, on that particular year.

21 I mean, so basically what I was
 22 looking at was essentially the raw number of
 23 claims. It wasn't anything that was designed
 24 on a -- it wasn't necessarily apples to apples.
 25 It was, you know, the raw number of claims that

1 A. When I conducted evaluations, my
 2 written report was scanned into SAP for each
 3 individual evaluation that I conducted.
 4 Whether it should be shared with a customer,
 5 you know, a layperson, probably looking at the
 6 formatted report may or may not understand
 7 based on looking at the data collection record
 8 without a summary. You know, I really don't
 9 have an opinion on that. You know, I wasn't
 10 the one that made the determination what to
 11 share and in what format.

12 Q. That was technical services?

13 A. That was technical services, and
 14 so I can't comment on what decision was made
 15 and why.

16 Q. If it were up to you and you were
 17 the decision-maker, would you share that report
 18 with a customer?

19 A. I simply can't speculate because
 20 I've not been in that position. You know, I
 21 uploaded both a report which was my raw data
 22 and I also summarized that data as well in SAP.

23 (Thereupon, Plaintiffs' Exhibit 11,
 24 email chain beginning with Bates stamp NIBCO-Cole
 25 00035758, was marked for purposes of

1 came in were put into a category and trended,
 2 and, no, it wasn't something I would have made
 3 a decision to share because, like I said, it
 4 was an internal Lebanon tracking document.

5 Q. Okay. I'll move to strike that as
 6 nonresponsive only because I think you're
 7 talking again about that weekly report, the
 8 document that contained information about the
 9 weekly report, and I guess I'm asking more
 10 specifically about the report that you would
 11 generate in a particular instance after
 12 evaluating field-returned sample.

13 So a customer gets the product
 14 return authorization form. Sends the sample
 15 in. You analyze it to determine whether it's
 16 within or out of spec, what type of defect it
 17 seems to have exhibited, and then you create
 18 some kind of written summary report of your
 19 findings, right?

20 A. Yes.

21 Q. So that written report
 22 specifically, not the trends or the tracking
 23 with that, but just that report in that
 24 instance, do you think NIBCO should share that
 25 report with the customer?

1 identification.)

2 THE WITNESS: Okay.

3 BY MR. KUHLMAN:

4 Q. Okay. So I've shown you another
 5 document that's an email chain. And though the
 6 numbers are cut off at the bottom, I'll
 7 represent for the record this document begins
 8 at Bates number NIBCO-Cole 00035758.
 9 Ms. Premus, I'll ask you again, have you seen
 10 this document before?

11 A. I vaguely recall having seen it,
 12 but I can't really remember many of the
 13 details.

14 Q. Okay. And this is an email chain
 15 discussing a failure of PEX tubing at an
 16 individual's residence, is that a fair
 17 description?

18 A. Based on the initial email, yes.

19 Q. Okay. And then if we turn to the
 20 second to last page of the document, at the
 21 bottom of that page there is an email that you
 22 wrote on Friday, September 21st, 2011, at
 23 12:49 p.m. Do you see that email?

24 A. Yes.

25 Q. In that email you raise the

1 possibility of covering Mr. Neisler who seems
 2 to be the homeowner at issue here --
 3 Mr. Neisler's expense in potentially replacing
 4 additional pipe in return for the ability to
 5 thoroughly evaluate his system, the water
 6 conditions, and recover product from the site
 7 for an internal investigation. Is that what
 8 you're saying in the email?
 9 A. That appears to be.

10 Q. And then you ask would this be
 11 taking on too much liability or could it help
 12 avoid the liability of placing a probable
 13 oxidative failure report in the hands of a
 14 homeowner if we cannot be sure of the exact
 15 conditions that led to the problem. Do you see
 16 that sentence?

17 A. Yes.

18 Q. So is some of the concern there
 19 that putting a NIBCO report stating that an OVI
 20 failure occurred in a tubing issue could
 21 potentially cause a liability issue for NIBCO?

22 MR. KUHLMAN: Object to form.

23 THE WITNESS: I mean, my intent is to
 24 make -- obviously from the email that I have in
 25 front of me is to make it right for the customer.

1 But on the other hand, you know, and this has been
 2 a long time, I don't specifically remember the
 3 details surrounding this. But based on what I've
 4 written and how I've written it, it appears
 5 that -- you know, I'm not a lawyer. I don't
 6 understand liability. You know, I'm a quality
 7 control professional. You know, my job is to test
 8 and make sure that the product meets the standard.

9 I'm not sure what the outcome is
 10 going to be. You know, I don't know whether --
 11 based on what I've written here, I don't know
 12 whether it's going to turn out to be a
 13 manufacturing or an environmental issue. And so
 14 it appears that I was just asking the question.
 15 The last page says, I'm considering both the needs
 16 of the customer and that, you know, we're trying
 17 to investigate issues that are in the field as
 18 well.

19 BY MR. KUHLMAN:

20 Q. Right. So let me ask about that
 21 actually. What were the other issues in the
 22 field that you're referencing here?

23 A. I don't -- I mean, it's been since
 24 2007. At this time I couldn't tell you based
 25 on what's in this email.

1 Q. I understand you're not a lawyer,
 2 and I'm not going to ask you to define what
 3 liability is or when NIBCO would be liable with
 4 certain circumstances. But I am curious why
 5 you felt when you wrote this email that it
 6 could be a potential liability to place a
 7 failure report in the hands of a homeowner?

8 MR. KUHLMAN: Object to form.

9 THE WITNESS: I simply at this time
 10 could not tell you.

11 BY MR. KUHLMAN:

12 Q. Okay. But in the email you were
 13 at least expressing some concern about that?

14 MR. KUHLMAN: Object to form.

15 THE WITNESS: I wrote what I wrote in
 16 the email. I can't tell you what I was thinking
 17 at the time. I do know as a quality professional,
 18 you know, laboratories aren't infallible, and at
 19 that time I also know that, you know, we didn't
 20 know necessarily what the outcome would be. Like
 21 I said, I was looking at the interests of the
 22 company and for the individual customer as well.

23 BY MR. KUHLMAN:

24 Q. And then the email chain goes on
 25 to discuss potential testing that JANA could

1 perform on the samples that the homeowner
 2 provided, correct?

3 A. Yes. With additional samples
 4 added that were from other homeowners.

5 Q. And then there's a discussion
 6 about -- well, at least Ken McCoy expresses a
 7 desire to keep the results of any testing
 8 exclusively within NIBCO's control, correct?

9 MR. KUHLMAN: Object to form.

10 BY MR. KUHLMAN:

11 Q. I'm specifically referring to his
 12 email on Friday, September 21st, at 1:09 p.m.

13 A. I can't speculate his reasoning,
 14 but that's apparently what he wrote.

15 Q. Okay. And then the email
 16 immediately following that that you wrote on
 17 September 21st at 1:27 p.m., you finished that
 18 email by saying we may need a different
 19 quotation containing all samples to give us
 20 exclusive rights to the results. Do you see
 21 that?

22 A. Well, yes, because we would be
 23 adding -- apparently according to this email
 24 chain, we would be adding samples from other
 25 customers that were not exclusive to this one

1 individual customer that we started discussing
 2 at the beginning of the chain. They may or may
 3 not have similar causes, so --

4 Q. So when you say we may need a
 5 different quotation containing all samples, are
 6 you excluding the samples that Mr. Neisler
 7 provided?

8 A. You know, this -- I can't -- this
 9 email is from 2007. To me, reading it, it
 10 would appear that the new quotation was for
 11 Mr. Neisler's sample plus additional samples
 12 from other customers to be added to that
 13 sample, at least from the way it reads. I
 14 can't -- I mean, it's been since 2007. I don't
 15 remember exactly what the chain of thought was
 16 or what necessarily transpired with this.

17 Q. Okay. I don't know if this
 18 context clarifies that for you at all, but if
 19 we go to the next email from Kurt Mast,
 20 September 21st, 2007, at 2:03 p.m., first of
 21 all, who -- well, it says Curt Mast was the
 22 technical services manager, right, at that
 23 time?

24 A. At that time, correct.

25 Q. That was before Ken McCoy took

1 Q. So without trying to speculate as
 2 to what other people were thinking, which is
 3 fair, is it accurate to say that Ken McCoy sent
 4 an email stating I think we want to keep the
 5 results solely in our hands to disseminate as
 6 we see fit? You followed that up with an email
 7 stating that you might need a different
 8 quotation to give NIBCO exclusive rights to the
 9 results, and then Mr. Mast followed that up
 10 with an email suggesting the best option might
 11 be to make a goodwill payment to Neisler so
 12 that NIBCO does not have to share the results.
 13 That's what this document says, right?

14 MR. KUHLMAN: Object to form.

15 THE WITNESS: I can only tell you --
 16 I can only speak to what I personally wrote. Like
 17 I said, it's been a long time. I don't remember
 18 all the facts around this. But, you know, looking
 19 at what I wrote, my train of thought appeared to
 20 be that if we're going to pull multiple samples
 21 from multiple customers together, we would need a
 22 new quote for that. And then it would become a
 23 NIBCO report as opposed to a report under the name
 24 of a customer, you know.

25 That at face value is simply what I

1 over in that role?

2 A. Yes.

3 Q. And in the second paragraph of his
 4 email, Mr. Mast says maybe our best option is
 5 to do a goodwill with Mr. Neisler so that we do
 6 not have to share the results. We could simply
 7 pass it off as the most economical approach,
 8 and it sounds like he would be receptive to
 9 this.

10 Does that indicate to you that
 11 NIBCO wants to keep the results of the testing
 12 it performs on Mr. Neisler's samples within its
 13 exclusive control?

14 MR. KUHLMAN: Object to form.

15 THE WITNESS: I can only see what's
 16 written here. I mean, I can't speculate as to the
 17 train of thought of any individual other than
 18 myself.

19 BY MR. KUHLMAN:

20 Q. But that's what it says, right, in
 21 the document at least?

22 A. I mean, I see what's written here
 23 in front of me. Like I said, I can't speculate
 24 as to why it was written that way or what his
 25 train of thought might have been at the time.

1 wrote. You know, I can't offer any speculation as
 2 to what other people were thinking at the time.
 3 Just an observation that, you know, we would need
 4 a new quote if we pulled from multiple samples
 5 together, and then it would be a NIBCO report.
 6 The original quote would not be valid anymore.

7 BY MR. KUHLMAN:

8 Q. One more question about this
 9 document. Going back then to the very first
 10 page of the document and one more email from
 11 Ken McCoy that was sent on September 25, 2007,
 12 at 11:34 a.m., do you see that email?

13 A. Yes.

14 Q. If we turn to the next page and
 15 look at what Mr. McCoy is writing, he says as
 16 it stands now, the JANA Labs quote was
 17 instigated by Neisler and he'd own the results
 18 of that testing if we pursued it. He'd be able
 19 to take those results and make them public, for
 20 example. By making a goodwill payment, Neisler
 21 relinquishes his claim to the failed pieces.
 22 Is that what Mr. McCoy's email says?

23 A. That's what's written on here.

24 Q. Does that statement in any way
 25 alter your previous testimony about the context

1 of this email chain?

2 MR. KUHLMAN: Object to form.

3 THE WITNESS: I mean, again, you're
4 asking me to speculate on thought process of other
5 individuals. I can testify to what I wrote and,
6 you know, probably why. I can't testify to the
7 thought process of somebody other than myself.
8 You know, I can, as you, you know, simply look at
9 what's written.

10 BY MR. KUHLMAN:

11 Q. And what's written by Mr. McCoy is
12 that making a goodwill payment would allow
13 NIBCO to have exclusive rights to the test
14 results so that Mr. Neisler would not be able
15 to make those results public, for example?

16 MR. KUHLMAN: Object to form.

17 THE WITNESS: I mean, I don't know
18 his thought process or rationale. I mean, I can
19 only see what I have written on this document.

20 BY MR. KUHLMAN:

21 Q. Fair enough. And that's what the
22 document says, though, right?

23 MR. KUHLMAN: Object to form.

24 THE WITNESS: I mean, I -- yes,
25 that's what the document says.

1 BY MR. KUHLMAN:

2 Q. At some point NIBCO reformulated
3 its PEX-C tubing, correct?

4 A. Yes.

5 Q. And that reformulation had a
6 designation of 3308?

7 A. Correct.

8 Q. What was the purpose of the
9 reformulation project?

10 A. That was a marketing decision.
11 I'm not sure that I know all of the facts with
12 respect to that. I mean, that would be more of
13 a marketing question.

14 Q. Did anyone at NIBCO ever explain
15 to you the reasoning that the product was being
16 reformulated?

17 A. Not that I can remember.

18 Q. Did you ever ask anyone at NIBCO
19 why the product was being reformulated?

20 A. Honestly, I don't remember.

21 Q. Okay. So you may have asked, you
22 may not have asked; you just don't remember
23 sitting here today right now?

24 A. I simply don't remember.

25 Q. How did the reformulated PEX

1 tubing differ from the 1006 tubing?

2 A. I know there was a different resin
3 supplier and there were different color
4 additive part numbers, but I don't know
5 everything that was done in the reformulation
6 process. That would have been at corporate
7 level.

8 Q. As the quality coordinator at
9 NIBCO and specifically for the PEX-C tubing, do
10 you feel it's important to know what materials
11 are being used to manufacture the tubing?

12 A. Well, I did know. I knew the
13 manufacture of the resin. It was a
14 polyethylene resin. It was a color package and
15 it had a UVA stabilizer pack in it. But, you
16 know, what specific changes were made, not
17 necessarily. My job involved manufacturing
18 quality and testing to make sure that, you
19 know, what was listed and what was handed down
20 was manufactured according to standard.

21 Q. As the quality coordinator at
22 NIBCO for PEX-C tubing, was it important for
23 you to know why NIBCO was manufacturing an
24 entirely new product for which you had quality
25 responsibility?

1 A. I mean, not necessarily. I mean,
2 in application there may be some customers
3 looking for a tubing that has a rating for
4 continuous recirculation. You know, it might
5 have been -- I just simply don't know what the
6 rationale was behind it. It could have been a
7 purely marketing decision.

8 Q. What makes you believe that it was
9 a marketing decision? Is that how it was
10 expressed to you?

11 A. I don't know. I simply don't
12 remember and I don't remember having the
13 discussion. I simply don't know. I don't know
14 that it was. I don't know that it wasn't. You
15 know, I know that there were more applications
16 for continuous recirc because it could be used
17 for both intermittent and continuous, but I
18 don't know if that was a factor or not. I
19 simply wasn't involved in that or can't
20 remember discussions that I had. I just don't
21 know.

22 Q. Okay. So you're just kind of
23 speculating or guessing that it might have been
24 a marketing decision?

25 A. I'm saying it could have been. I

<p>1 don't know.</p> <p>2 Q. It could have been like anything</p> <p>3 could happen in the world or do you have any</p> <p>4 basis to think that?</p> <p>5 A. I simply don't -- I have no basis</p> <p>6 to think that. I just don't know what the</p> <p>7 rationale was. You'd have to ask the people</p> <p>8 involved with that.</p> <p>9 Q. Are you aware that Mark Clark, Ken</p> <p>10 McCoy, and Earl Sexton have all also previously</p> <p>11 testified in this case that the reformulation</p> <p>12 was a marketing decision?</p> <p>13 A. I haven't had discussions with</p> <p>14 them. I've not seen any other depositions.</p> <p>15 You know, I wasn't aware that they've already</p> <p>16 testified for this case.</p> <p>17 Q. But no one at NIBCO ever told you</p> <p>18 that it was a marketing decision? That was</p> <p>19 just something you kind of threw out as a</p> <p>20 possibility?</p> <p>21 A. Not that I can remember. I mean,</p> <p>22 I'm just, you know, somebody thinking, okay, if</p> <p>23 I were in that role, you know, why might I seek</p> <p>24 a different listing. I mean, it's just a</p> <p>25 possibility, you know, based on industry</p>	<p>1 communications or just when you were with CPI?</p> <p>2 A. Probably just with CPI.</p> <p>3 Q. And what were those</p> <p>4 communications -- what was the content of those</p> <p>5 communications?</p> <p>6 A. Basically establishing an NSF</p> <p>7 listing.</p> <p>8 Q. For PEX tubing?</p> <p>9 A. Yes.</p> <p>10 Q. Was it a specific color or</p> <p>11 multiple colors?</p> <p>12 A. Multiple colors, and I believe</p> <p>13 actually the person I initially had</p> <p>14 consultation with was Nazarene Kashay</p> <p>15 (phonetic). Alicia later took a role as a</p> <p>16 project leader for NIBCO. But the original</p> <p>17 listing was set up through Nazarene.</p> <p>18 Q. Was that the terra cotta listing,</p> <p>19 the initial listing, or do you recall?</p> <p>20 A. The terra cotta was the</p> <p>21 independent listing, and then we had the</p> <p>22 department listings based on the terra cotta</p> <p>23 profile. But I can't remember all the details.</p> <p>24 That's been 12 years ago.</p> <p>25 Q. Okay. So when you say you were</p>
<p>1 knowledge. I simply don't know.</p> <p>2 Q. Did you have any role in the</p> <p>3 reformulation product?</p> <p>4 A. Really, no.</p> <p>5 Q. Setting aside the reformulation</p> <p>6 project, when you had communications with JANA</p> <p>7 as a part of your job responsibilities, with</p> <p>8 whom at JANA did you communicate?</p> <p>9 A. The person I communicated with the</p> <p>10 most was Sarah Chung, and that was because up</p> <p>11 until recently we used to do routine</p> <p>12 manufacturing gel testing with them.</p> <p>13 Q. Okay. Until you had brought those</p> <p>14 capabilities inhouse?</p> <p>15 A. Correct.</p> <p>16 Q. Did you ever communicate with</p> <p>17 someone named Alicia Valentine at JANA labs?</p> <p>18 A. Yes, but that was way back before</p> <p>19 the acquisition when I did have those</p> <p>20 responsibilities.</p> <p>21 Q. So that's when you were with</p> <p>22 E-BEAM and CPI?</p> <p>23 A. Correct.</p> <p>24 Q. Was it during both of those years,</p> <p>25 E-BEAM and CPI that you would have had those</p>	<p>1 Page 231</p> <p>1 communicating with Nazarene about the listing,</p> <p>2 you're just not sure which listing that was</p> <p>3 because it was so many years ago?</p> <p>4 A. I was thinking all of our colors</p> <p>5 were listed, but I don't remember the sequence</p> <p>6 and I don't remember the specifics. It's been</p> <p>7 a long time.</p> <p>8 Q. Who owns NIBCO?</p> <p>9 A. Who owns NIBCO? I mean, we have</p> <p>10 the Martin family and obviously we have our</p> <p>11 board of directors.</p> <p>12 Q. Okay. What's the Martin family's</p> <p>13 role in NIBCO?</p> <p>14 A. I think Rex Martin is or was</p> <p>15 chairman of the board, CEO. His wife, Alice,</p> <p>16 currently I'm not sure what her role is, but</p> <p>17 for a while she was the chief people officer,</p> <p>18 the head of HR.</p> <p>19 Q. Any other Martins involved legally</p> <p>20 with NIBCO?</p> <p>21 A. Their daughter Ashley more</p> <p>22 recently.</p> <p>23 Q. What's Ashley's role at the</p> <p>24 company?</p> <p>25 A. You know, I'm not sure what she's</p>

1 doing now. She managed the Lebanon site for
 2 probably about a year, and then she transferred
 3 on to a different role in the organization.
 4 That was relatively recent.

5 Q. Managed the Lebanon facility, was
 6 within the last, say, three years?

7 A. Yeah.

8 Q. And she did that for about a year
 9 approximately?

10 A. Approximately.

11 Q. So were you working with her on a
 12 day-to-day basis then in your role?

13 A. I reported to her, but I didn't
 14 see her on a day-to-day basis. She traveled
 15 back and forth between Elkhart and Lebanon.

16 Q. Okay. And she was -- in that role
 17 she was responsible for the operations of the
 18 Lebanon plant?

19 A. During that time, yes.

20 Q. Including the manufacture of the
 21 PEX-C tubing?

22 A. Yes.

23 Q. Have you ever had communications
 24 with Rex Martin?

25 A. Very, very, very limited. Not for

1 that he may be fishing somewhere. Do you think
 2 that's a possibility?

3 A. I think anything's possible. I
 4 don't know.

5 Q. I'm just kind of joking with you.
 6 Okay. I'm just going to take a second to look
 7 at my notes, but I think that may be it for me.

8 A. Sure.

9 (Pause in proceedings.)

10 BY MR. KUHLMAN:

11 Q. We've talked a little bit about
 12 the use of the PER system for tracking warranty
 13 claims, right?

14 A. Yes.

15 Q. Is there any other system for
 16 tracking customer complaints outside of the PER
 17 system at NIBCO?

18 A. The only system that exists is
 19 completely entered into the NIBCO SAP. PER
 20 system is the tracking system that I had
 21 locally at the site. It was initiated prior to
 22 the NIBCO acquisition. And also, because the
 23 PER numbers, the way they come in, they're not
 24 like one, two, three, four, five, but each of
 25 my documents have the PER number written on

1 any length of time on any specific issue.

2 Q. So let me kind of maybe focus
 3 that. Did you ever have any communications
 4 with Rex Martin that related to PEX-C tubing
 5 specifically?

6 A. No, not that I can remember. I
 7 don't believe so.

8 Q. Okay. What about be his wife
 9 Alice? Did you ever have any communications
 10 with Alice that related to PEX-C tubing?

11 A. I don't believe so.

12 Q. Do you know what Larry Smallwood
 13 is up to these days?

14 A. I have no idea what he's doing
 15 since he left us.

16 Q. When did he leave?

17 A. I don't know the year. I just
 18 know that he stayed for maybe a couple of years
 19 after the acquisition, but I'm not sure when it
 20 was that he left at this point. It's been a
 21 while.

22 Q. Okay. And you haven't
 23 communicated with him since he left?

24 A. No.

25 Q. A couple people have testified

1 them. Like I said, my numbering system was the
 2 last two digits of the year, hyphen, and then
 3 whatever the sequence of the claim was, 01, 02,
 4 03, 04, until however many we had that year.
 5 But those documents always reference the PER
 6 number and were uploaded into the SAP system so
 7 there were no claims that were outside of the
 8 SAP system.

9 Q. Okay. And there were no -- to
 10 your knowledge, other than PERs and your
 11 tracking document that you were just
 12 describing, are there any other ways that
 13 customer complaints would be tracked within
 14 NIBCO --

15 A. Not to my knowledge.

16 Q. -- with respect to PEX-C tubing?

17 A. Yeah, not to my knowledge.

18 MR. SHAMBERG: Okay. Those are all
 19 the questions I have.

20 * * *

21 DIRECT EXAMINATION

22 BY MR. KUHLMAN:

23 Q. I have a few follow-up questions.

24 First, you were asked some questions about an
 25 exhibit. It's marked as Exhibit 3. Take a

<p style="text-align: right;">Page 238</p> <p>1 minute and find that. Let me know when you 2 have it.</p> <p>3 A. I have it.</p> <p>4 Q. So Exhibit 3 references 5 192,767 feet of defective one-inch white PEX 6 pipe, is that right?</p> <p>7 A. Yes.</p> <p>8 Q. Was this PEX pipe sold to 9 customers or is this tubing that was identified 10 during a quality control process put in place 11 by NIBCO?</p> <p>12 A. Due to the sheer volume of it and 13 the way the memo was written, this would have 14 been something that was put on hold as a 15 response to an internal quality test at the 16 plant.</p> <p>17 Q. NIBCO had pressure testing in 18 place to check for problems like this and 19 pinhole-type leaks, is that right?</p> <p>20 A. That's correct.</p> <p>21 Q. And so those quality control steps 22 actually caught this tubing before it was sold 23 and it ended up being scrapped, is that fair?</p> <p>24 A. Yes.</p> <p>25 Q. And let me ask you a few questions</p>	<p style="text-align: right;">Page 240</p> <p>1 BY MR. KUHLMAN: 2 Q. And so would that be an issue that 3 would be corrected before a homeowner ever 4 moves into a house?</p> <p>5 A. Assuming that there was a pressure 6 test that was conducted, a pinhole leak is a 7 known manufacturing defect. It's one that, 8 like I said, occurs at the time of 9 manufacturing. It's not a defect that 10 three years down the line you would expect to 11 see. You would expect to see it from the start 12 immediately upon installation.</p> <p>13 Q. During your time working as the 14 quality coordinator looking at returned PEX 15 samples, can you recall any instances of actual 16 homeowners sending in tubing that had what you 17 would identify as a pinhole leak?</p> <p>18 A. I think there may have been one or 19 two, but it was very, very infrequent that we 20 would see that.</p> <p>21 Q. And that was over the course of 22 seven years?</p> <p>23 A. I mean, since about 2006 is when I 24 had that formal documenting process.</p> <p>25 Q. And you were asked a few questions</p>
<p style="text-align: right;">Page 239</p> <p>1 about pinhole leaks. Do you remember answering 2 a few questions about those?</p> <p>3 A. Yes.</p> <p>4 Q. Okay. When would a pinhole leak 5 present itself generally? Is that something 6 that is present at the time of manufacturing or 7 is that something that develops over time?</p> <p>8 A. That would be present at the time 9 of manufacturing. It would occur during the 10 beaming process. If there were particular 11 matters or contaminants in the resin itself.</p> <p>12 Q. And is that, identifying tubing 13 that has pinhole leaks, is that one of the 14 goals of the pressure testing that NIBCO does?</p> <p>15 A. That is correct.</p> <p>16 Q. And if tubing is not caught by 17 NIBCO's pressure testing that has a pinhole 18 leak, is that ultimately going to affect the 19 homeowner or is that something that would 20 routinely be caught by pressurizing a system 21 during inspection?</p> <p>22 MR. SHAMBERG: Object to form.</p> <p>23 THE WITNESS: If a system were 24 pressurized, they should be able to note if 25 there's a leak.</p>	<p style="text-align: right;">Page 241</p> <p>1 about the red tubing and testing performed by 2 JANA. Do you remember answering some questions 3 about that?</p> <p>4 A. Yes.</p> <p>5 Q. And is it your understanding that 6 based on the testing data that NSF had with 7 respect to the red tubing that NSF believed 8 that the pipe -- the red pipe should have been 9 certified?</p> <p>10 MR. SHAMBERG: Objection. Calls for 11 speculation.</p> <p>12 THE WITNESS: The red pipe was 13 certified. We had, to my knowledge, from, you 14 know, the time of my employment through the end of 15 manufacturing that formulation, we maintained an 16 unbroken listing for red tubing as well as the 17 other colors.</p> <p>18 BY MR. KUHLMAN:</p> <p>19 Q. And NSF at all times had access to 20 the testing data, is that fair?</p> <p>21 A. That's correct.</p> <p>22 Q. And NSF interprets that data in 23 assessing the tubing, is that fair?</p> <p>24 A. To my knowledge, that's correct.</p> <p>25 Q. And NSF concluded that based on</p>

<p style="text-align: right;">Page 242</p> <p>1 the data it had, NIBCO's red tubing was fit for 2 certification? 3 A. I mean, I know that they issued 4 the certification to us. 5 Q. So they certified based on -- 6 A. We had unbroken certification 7 through all those years for that product. 8 Q. Were you involved at all in 9 filling out the statistical analysis or filling 10 in the numbers on any of the mathematical 11 equations? 12 A. No. 13 Q. Other than kind of a general 14 understanding of how that works, can you sit 15 here right now and explain the actual 16 mathematical equation? 17 A. No. I mean, all of that raw data 18 would have been transferred directly to NSF and 19 then a report would have been generated. 20 MR. KUHLMAN: Okay. Let go off the 21 record for just a couple of minutes. 22 (Pause in proceedings.) 23 BY MR. KUHLMAN: 24 Q. Ms. Premus, we are back after a 25 short break. I'd like to direct your</p>	<p style="text-align: right;">Page 244</p> <p>1 the extrusion department. 2 MR. KUHLMAN: That's all I've got. 3 We'll reserve the rest for trial. 4 MR. SHAMBERG: Me, too, I'm done. 5 MR. KUHLMAN: We will order an e-tran 6 with scanned copies of the exhibits. 7 MR. SHAMBERG: Ditto. 8 (Thereupon, signature was not 9 waived.) 10 (Thereupon, the deposition was 11 concluded at 4:30 p.m.) 12 13 14 15 16 17 18 19 20 21 22 23 24 25</p>
<p style="text-align: right;">Page 243</p> <p>1 attention, if I could, to Exhibit 2. You were 2 asked a few questions about this document 3 earlier. Do you remember talking about this 4 document? 5 A. Yes. 6 Q. Okay. And this references an NSF 7 audit and a finding where there was not 8 calibration documentation, is that right? 9 A. Yes. 10 Q. And you had requested 11 documentation regarding the calibration from 12 Larry Smallwood, is that right? 13 A. Yes. 14 Q. And did he tell you that the 15 documentation didn't exist or was he just 16 simply not providing it, or do you remember 17 right now if you ultimately received those 18 documents or not? 19 A. At this point I honestly don't 20 remember. 21 Q. Okay. Was it generally part of 22 your job responsibility to maintain documents 23 associated with calibrating the extrusion 24 equipment? 25 A. No. That would have been done by</p>	<p style="text-align: right;">Page 245</p> <p>1 I, DEBORAH PREMUS, do hereby certify that 2 the foregoing is a true and accurate transcription 3 of my testimony. 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25</p> <p style="text-align: right;">----- Dated _____</p>

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1 STATE OF OHIO)
2 COUNTY OF MONTGOMERY) SS: CERTIFICATE
3 I, Stacey M. Mortsolf, a Notary Public
4 within and for the State of Ohio, duly
5 commissioned and qualified,
6 DO HEREBY CERTIFY that the
7 above-named DEBORAH PREMUS, was by me first duly
8 sworn to testify the truth, the whole truth and
9 nothing but the truth.

10 Said testimony was reduced to writing
11 by me stenographically in the presence of the
12 witness and thereafter reduced to typewriting.

13 I FURTHER CERTIFY that I am not a
14 relative or Attorney of either party, in any
15 manner interested in the event of this action, nor
16 am I, or the court reporting firm with which I am
17 affiliated, under a contract as defined in Civil
18 Rule 28(D).

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25

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1 IN WITNESS WHEREOF, I have hereunto set my
2 hand and seal of office at Dayton, Ohio, on this
3 23rd day of December, 2016.

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9 STACEY M. MORTSOLF, RPR, CRR
NOTARY PUBLIC, STATE OF OHIO
My commission expires 5-31-2020
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A abbott 7:23 ability 85:18 131:3 218:4 able 13:15 39:1,6 39:15,17,20 40:9 40:12,16 69:2 73:6 134:24 148:21 149:11 150:21 179:13,14 181:12 225:18 226:14 239:24 abnormality 124:21 abovenamed 246:7 absent 37:23 38:25 absolutely 16:24 accelerated 175:7 accepted 15:21 access 209:15 241:19 accidentally 125:16 accompanied 134:9 accuracy 22:17 accurate 28:4 33:4 64:17 87:10 90:18 93:18 110:9,12 152:8,16,23 204:2 224:3 245:2 accurately 80:23 192:22 achieve 88:16 99:17 101:5,25 102:20 acquired 55:7 208:16 acquisition 59:18 121:5,25 124:18 164:5,18 165:23 187:9,18,21,23 188:1,10,15 231:19 235:19 236:22 acronym 124:9 action 1:10 82:9	246:15 actual 16:14 57:10 62:24 65:8 81:1 85:3 93:2 158:4 240:15 242:15 add 97:11 added 210:2 221:4 222:12 adding 221:23,24 additional 28:11,18 37:19 40:19 47:1 77:10 83:15 102:25 104:10,13 110:23 111:17 112:23 129:11 130:23 132:12,16 137:9 152:3 156:4 157:12 160:21 199:17,24 218:4 221:3 222:11 additive 228:4 address 44:21 76:19 133:3 153:20 155:17 addressed 77:14,17 78:6 155:3 161:1 adds 49:14 adequately 115:21 adhered 12:18 adjust 119:15,22 adjustment 108:21 119:25 administration 16:21 advanced 18:13,14 19:21 20:1,3 advantageous 131:2 adverse 103:2 advise 8:14 affect 83:10 98:19 100:24 103:2 133:21 144:18 239:18 affiliated 246:17 age 6:2	agencies 12:25 22:7 22:12 27:18 28:16 41:6,12 56:21,21 165:10 166:4 171:20 agency 23:19 57:6 added 210:2 221:4 222:12 adding 221:23,24 additional 28:11,18 37:19 40:19 47:1 77:10 83:15 102:25 104:10,13 110:23 111:17 112:23 129:11 130:23 132:12,16 137:9 152:3 156:4 157:12 160:21 199:17,24 218:4 221:3 222:11 additive 228:4 address 44:21 76:19 133:3 153:20 155:17 addressed 77:14,17 78:6 155:3 161:1 adds 49:14 adequately 115:21 adhered 12:18 adjust 119:15,22 adjustment 108:21 119:25 administration 16:21 advanced 18:13,14 19:21 20:1,3 advantageous 131:2 adverse 103:2 advise 8:14 affect 83:10 98:19 100:24 103:2 133:21 144:18 239:18 affiliated 246:17 age 6:2	107:5 122:22,23 189:22 212:5 analyses 123:17 124:14 125:6,12 125:13,21 126:4 aggressive 141:21 142:2,6,8,15,24 143:20,23 144:8 144:10,13,15,19 144:22,24 146:5,7 146:25 147:7,11 148:3,12 aging 137:2 175:7 ago 10:20 29:23 33:18 45:17 167:21 214:2 232:24 233:3 agree 29:7 agreement 6:19 17:24 ahead 35:20,21 125:19 aid 16:6,7 air 21:9 alan 1:4 alice 233:15 235:9 235:10 alicia 231:17 232:15 align 174:19 administration 16:21 advanced 18:13,14 19:21 20:1,3 advantageous 131:2 adverse 103:2 advise 8:14 affect 83:10 98:19 100:24 103:2 133:21 144:18 239:18 affiliated 246:17 age 6:2	answers 8:8 193:13 anticipated 169:10 182:24 antioxidant 49:16 158:7,8 197:1 antonio 192:2 anymore 74:18 225:6 anythings 236:3 apparatus 118:2 apparent 76:22 apparently 46:7 75:11 76:15 106:12,19 111:17 analysis 123:14 112:12 140:20 181:7 197:22 205:21 221:14,23 appear 29:18 141:10 153:14 193:4 222:10 appearance 36:5 38:6 198:24 appearances 5:1 appeared 57:21,23 115:22 224:19 appears 40:14 72:3 78:2 87:6 105:9 105:10 154:23 155:14 187:7 189:16 204:24 205:1 206:3 218:9 219:4,14 apples 214:24,24 applicable 21:21 103:11 application 96:11 139:1 145:18 146:13,18 147:8 149:14 151:7,20 152:22 153:6 180:14 206:17 229:2 applications 32:8 229:15 applied 92:11 116:11,13,22
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